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on

CRYSTAL STRUCTURES OF T. FOETUS INOSINE MONOPHOSPHATE  
DEHYDROGENASE IN COMPLEX WITH SUBSTRATE, COFACTOR AND  
ANALOGS AND USES THEREOF

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CRYSTAL STRUCTURES OF *T. FOETUS* INOSINE MONOPHOSPHATE  
DEHYDROGENASE IN COMPLEX WITH SUBSTRATE, COFACTOR AND  
ANALOGS AND USES THEREOF

5           This application claims benefit of the filing  
date of U.S. Provisional Application No. 60/410,523,  
filed September 13, 2002, and U.S. Provisional  
Application No. 60/412,044, filed September 18, 2002,  
both of which are incorporated herein by reference.

10

BACKGROUND OF THE INVENTION

          This invention relates generally to drug  
15 development and, more specifically, to designing  
compounds that modulate inosine monophosphate  
dehydrogenase.

          The enzyme inosine monophosphate dehydrogenase  
20 (IMPDH) is responsible for the rate-limiting step in  
guanine nucleotide biosynthesis. Because it is up-  
regulated in rapidly proliferating cells, human type II  
IMPDH is actively targeted for immunosuppressive,  
anticancer, and antiviral chemotherapy. The enzyme  
25 employs a random-in ordered-out kinetic mechanism where  
substrate or cofactor can bind first but product is only  
released after the cofactor leaves. Due to structural  
and kinetic differences between mammalian and microbial  
enzymes, most drugs that are successful in the inhibition  
30 of mammalian IMPDH are far less effective against the  
microbial forms of the enzyme. However, with greater  
knowledge of the structural mechanism of the microbial

enzymes, more effective and selective inhibitors of microbial IMPDH can be developed for use as anti-microbial drugs.

5           Thus, there exists a need for identifying and designing compounds that modulate IMPDH activity. The present invention satisfies this need and provides related advantages as well.

10

### SUMMARY OF THE INVENTION

The invention provides a crystalline complex containing *T. foetus* inosine monophosphate dehydrogenase  
15 (IMPDH) in complex with inosine monophosphate (IMP), the complex specified by disclosed atomic coordinates. Also provided are crystalline complexes of containing *T. foetus* IMPDH with both inosine monophosphate (IMP) and mycophenolic acid, with both xanthosine monophosphate  
20 (XMP) and mycophenolic acid, with both xanthosine monophosphate (XMP) and nicotinic adenine dinucleotide (NAD), with ribovirin (1- $\beta$ -D-ribofuranosyl-1,2,4-triazole-3-carboxamide), and with both ribovirin and mycophenolic acid, each complex specified by disclosed  
25 atomic coordinates. The *T. foetus* IMPDH structures have complete active sites. Also provided by the invention are the atomic coordinates for these complexes. Further provided by the invention are methods for identifying a modulator of IMPDH that employ the atomic coordinates of  
30 the invention.

The invention provides methods for identifying an inhibitor of IMPDH. In one embodiment, a method of the invention involves displaying a structure for IMPDH, or a portion thereof, wherein the structure has a set of atomic coordinates shown in Tables 2-7; (b) docking a structure of a candidate inhibitor to the structure of IMPDH, or the portion thereof; and (c) identifying an inhibitor of IMPDH, wherein the inhibitor has a structure that docks favorably to the structure of IMPDH, or the portion thereof. In one embodiment, the method is used to identify an inhibitor that targets the substrate binding site to which IMP or XMP binds. In another embodiment, the method is used to identify an inhibitor that targets the NAD cofactor binding site to which NAD or MOA binds. In a further embodiment, the method can include docking a candidate inhibitor to a second IMPDH structure.

In another embodiment, the invention provides a method of identifying an inhibitor of IMPDH that involves displaying the structure for the bound complex of *T. foetus* IMPDH with NAD set forth in Table 5, (b) docking a structure of a candidate inhibitor to said structure, or portion thereof; and identifying a compound that binds Asp-358 and Asp-261, wherein said compound has a structure that docks favorably to said structure, or portion thereof.

In a further embodiment, the invention provides a method of identifying an inhibitor of IMPDH that involves (a) selecting a candidate compound by performing rational drug design with a set of atomic coordinates set forth in



Tables 2-7, wherein said selecting is performed in conjunction with computer modeling; (b) contacting said compound with IMPDH, and (c) determining the ability of said compound to reduce IMPDH activity, wherein a  
5 compound that reduces IMPDH activity is an inhibitor of IMPDH.

#### BRIEF DESCRIPTION OF THE DRAWINGS

10           Figure 1 shows IMPDH crystals from the original ammonium sulfate condition (left) compared with those grown from the sodium malonate (right). In malonate, the crystals grew to 0.4-0.8 mm in length while the sulfate crystals grew to between 0.1 and 0.4 mm. The sulfate-  
15 grown crystals were also much more fragile. Further, the malonate in the mother liquor acted as a cryoprotectant. No detectable needle-shaped crystals, which were observed in the sulfate condition, were observed in the malonate condition.

20

          Figure 2 shows a ribbon diagram of the IMPDH tetramer viewed along the four-fold axis. The enzyme is in complex with the product XMP (light shading), the cofactor NAD<sup>+</sup> (dark shading) and the potassium. Although  
25 the cofactor lies along the dimer interface, it does not make contact with the neighboring monomer. All molecular images were prepared with the program Deepview and rendered in POVray 3.5 beta.

30

          Figure 3 shows the active site loop of *T. foetus* IMPDH. A 2.2 Å resolution 2F<sub>o</sub>-F<sub>c</sub> electron density map contoured at 0.5 σ surrounds a model of the active

site loop from the IMP-bound structure. The low contouring level is necessary to obtain continuous electron density.

5           Figure 4 shows that a potassium ion was located at the dimer interface near the cofactor binding site. The carbon atoms of the neighboring monomer are shaded and waters are shown as spheres. The ion's hydrogen bonding partners and bond distances, clockwise from  
10 Asp264, are 2.94 Å and 2.49 Å, Asn460 (2.66 Å), Ser22 (2.57 Å), Gly20 (2.30 Å), and Phe260 (2.64 Å).

          Figure 5 shows a ribbon diagram of one IMPDH monomer looking down the barrel of the protein with  
15 bound, XMP, NAD<sup>+</sup> (both in CPK), and the potassium ion.

          Figure 6 shows binding of the inhibitor MOA to IMPDH showing bonds (a) with IMP (substrate) and (b) with XMP (product). A notable difference is the movement of  
20 the Glu431 side chain, which binds both the substrate and the inhibitor in the IMP-bound structure.

          Figure 7 shows a comparison of the active site loop of the *B. burgdorferi* apo structure (purple) with  
25 those of *T. foetus* IMP-bound (yellow), IMP+MPA (blue), XMP+MPA (green), and XMP+NAD<sup>+</sup> (red) shows a high degree of stability throughout the core domain of the enzyme as well as the resolved portion of active site flap during substrate and product binding. Also pictured are XMP and  
30 NAD<sup>+</sup> in CPK and the potassium ion in gray.

Figure 8 shows a comparison of the fit of the *T. foetus* product XMP and NAD<sup>+</sup> into electron density. On the left, the *T. foetus* structure is shown with a 2Fo - Fc electron density map contoured at 1.0  $\sigma$ , and on the right, the published human structure with 6-Cl IMP and the cofactor analog, SAD, uses a  $\sigma_A$ -weighted Fo-Fc omit map. Panel b illustrates the binding of NAD<sup>+</sup> to the cofactor binding site of *T. foetus* IMPDH. NAD<sup>+</sup> makes extensive use of hydrogen bonds with IMPDH and ordered waters. The nicotinamide ring  $\pi$ -bonds with the purine ring of XMP while the adenosine ring stacks between Trp269 and Arg241.

Figure 9 shows a structural alignment demonstrates that potassium binding is conserved through all *T. foetus* structures presented here. The carbon atoms of a neighboring monomer are shown in dark gray. The *T. foetus* structure contains an aspartate at 264 while the mammalian enzyme (purple oxygens) has substituted a glutamine (b) and the bacterial enzyme (also purple oxygens) substitutes a histidine (c). Both of these side chains leave no room for the ion. An alignment of the *T. foetus* structure (blue), human structure (yellow) and *S. pyogenes* structure (green) shows that this does not appear to uniquely alter the dimer interface (d).

Figure 10 shows a 2Fo-Fc electron density map contoured at 0.6  $\sigma$  reveals that  $\Pi$  stacking is involved in forming the crystallographic dimer interface and that Trp416 from each monomer may occupy a position at the two-fold interface at 50% occupancy.

Figure 11 shows structural formulas of the indicated compounds. The product XMP contains an additional keto group at the C2 position of the substrate  
5 IMP. This figure was created with Ligplot (Wallace et al., Prot. Eng. 8:127-134 (1995)) and Photoshop (Adobe Systems, San Jose, CA).

Figure 12 shows a Michaelis-Menten graph. The  
10 initial velocity increases with increasing concentration of substrate. The concentrations of enzyme and cofactor were held constant.

Figure 13 is a plot showing IMPDH inhibition  
15 with increasing concentration of RMP. The concentrations of IMP,  $\text{NAD}^+$ , and enzyme are constant.

Figure 14 shows a ribbon diagram of the IMPDH tetramer viewed looking down the four fold axis. The  
20 enzyme is in complex with the inhibitor RMP (CPK) and a sodium ion (green). A potassium ion (blue) lies in the dimer interface near the cofactor binding site. This image was made in Deepview (Guex and Peitsch, Electrophoresis 18:2714-2723 (1997)) and rendered in  
25 POVRAY 3.5 beta ([www.povray.org](http://www.povray.org)).

Figure 15 shows composite annealed omit  
electron density maps at 1.9 Å resolution surrounding the inhibitor RMP (a) contoured at 1.8  $\sigma$ . The MOA-soaked RMP  
30 co-crystal structure (b) at 2.2 Å shows nearly complete density for MOA only when contoured at 0.5  $\sigma$  despite

soaking in saturating amounts of MOA. Soaking for longer periods did not improve occupancy.

Figure 16 shows a diagram of RMP hydrogen bonds with IMPDH. Like IMP, RMP makes many bonds with ordered waters and main chain atoms. Only the Tyr405 hydroxyl and the Asp358 carboxylate side chains make contact with the inhibitor. Additionally, Met59, Ile318, and Gly407 make hydrophobic contacts. Solvent accessibility is indicated by the yellow border around RMP, where lighter color indicates greater accessibility. This figure was created with NACCESS (Hubbard and Thornton, University College London, Department of Biochemistry and Molecular Biology, (1993)), HBPLUS (McDonald and Thornton, J. Mol. Biol. 238:777-793 (1994)), and LIGPLOT.

Figure 17 shows that the ion binding site (green) is composed of backbone carbonyls from the active site loop residues, including the active site cysteine, and residues from the C-terminus of the neighboring catalytic monomer (gray carbons).

#### DETAILED DESCRIPTION OF THE INVENTION

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This invention relates to crystalline compositions of *Tritrichomonas foetus* (*T. foetus*) inosine monophosphate dehydrogenase (IMPDH) complexes with its natural substrate, product, cofactor and inhibitors. The invention further relates to the discovery of high resolution crystal structures of different complexes of IMPDH, including complexes with its substrate IMP; with

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IMP and inhibitor mycophenolic acid (MPA); with inhibitor ribovirin; with MOA and ribovirin; with the product XMP and MOA; and with XMP and the cofactor  $\text{NAD}^+$ .

5           As disclosed herein, six complexes of *T. foetus* IMPDH bound with IMP, IMP+MPA, XMP+MPA, XMP+ $\text{NAD}^+$ , ribavirin and ribavirin+MOA. In particular, the high-resolution crystal structures of four *T. foetus* IMPDH complexes with substrate, cofactor, and inhibitors-- IMP, 10 XMP+ $\text{NAD}^+$ , IMP+MPA, and XMP+MPA--represent the first *T. foetus* structures with a complete active site, the first IMPDH structure with the  $\text{NAD}^+$  cofactor bound, and the first with MOA bound in addition to unreacted substrate, and product. As is described in Example IV, a novel 15 monovalent cation bound at the dimer interface that is likely unique to *T. foetus* and can contribute to the stability of the cofactor binding site. The active site cation appears to be present only in the covalent substrate-complex and conformations further along the 20 catalytic cycle for most eukaryotic organisms, but it is already present in prokaryotic organisms upon substrate binding.

          Current development of drugs that bind IMPDH 25 has focused on developing highly potent inhibitors of the human form of the enzyme. The invention provides structural information useful for development of inhibitors of microbial IMPDH. Compounds designed as inhibitors of microbial IMPDH are useful for treating 30 diseases caused by a variety of microbes, including for example, bacteria, viruses and parasites.

In one embodiment, the invention provides atomic coordinates for the bound complex of *T. foetus* inosine monophosphate dehydrogenase (IMPDH) with inosine monophosphate (IMP). The atomic coordinates for the  
5 IMPDH-IMP complex are provided in Table 2.

In another embodiment, the invention provides atomic coordinates for the bound complex of *T. foetus* IMPDH with IMP and mycophenolic acid (also referred to  
10 herein as MOA or MOA). The atomic coordinates for the IMPDH-IMP-MOA ternary complex are provided in Table 3.

In a further embodiment, this invention further provides atomic coordinates for the bound complex of *T.*  
15 *foetus* IMPDH with xanthosine monophosphate (XMP) and MOA. The atomic coordinates for the IMPDH-XMP-MOA ternary complex are provided in Table 4.

Also provided by the invention are atomic  
20 coordinates for the bound complex of *T. foetus* IMPDH with xanthosine monophosphate (XMP) and nicotinic adenine dinucleotide (NAD). The atomic coordinates for the IMPDH-XMP-NAD ternary complex are provided in Table 5.

25 The invention further provides atomic coordinates for the bound complex of *T. foetus* IMPDH with ribovirin (1- $\beta$ -D-ribofuranosyl-1,2,4-triazole-3-carboxamide. The atomic coordinates for the IMPDH-ribovirin complex are provided in Table 7.

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The invention further provides atomic coordinates for the bound complex of *T. foetus* IMPDH with

ribovirin and MOA. The atomic coordinates for the IMPDH-ribovirin complex are provided in Table 6.

As used herein, the term "atomic coordinates" means Cartesian structure coordinates derived from mathematical equations relating to the patterns obtained on diffraction of a monochromatic beam of X-rays by the atoms (scattering centers) of IMPDH complexes in crystal form. The diffraction data are used to calculate an electron density map of the repeating unit of the crystal. The electron density maps are then used to establish the positions of the individual atoms of the IMPDH complexes. Those of skill in the art will understand that a set of atomic coordinates for an enzyme or an enzyme-complex or portion thereof, is a relative set of points that define a shape in three dimensions. Thus, it is possible that an entirely different set of coordinates could define a similar or identical shape. Moreover, slight variations in the individual coordinates will have little effect on overall shape.

The variations in coordinates discussed above can be generated because of mathematical manipulations of the atomic coordinates. For example, the atomic coordinates set forth in Tables 2-7, can be manipulated by crystallographic permutations of the atomic coordinates, fractionalization of the atomic coordinates, rotation of the atomic coordinates, integer additions or subtractions to sets of the atomic coordinates, inversion of the atomic coordinates or any combination of the above.



Alternatively, modifications in the crystal structure due to mutations, additions, substitutions, and or deletions of amino acids, or other changes in any of the components that make up the crystal could also account for variations in structure coordinates. If such variations are within an acceptable standard error as compared to the original coordinates, the resulting three-dimensional shape is considered to be the same.

10 The atomic coordinates of the invention can be stored in a memory or computer readable medium. A memory or computer readable medium can be a hard disk, floppy disc, compact disc, magneto-optical disc, Random Access Memory, Read Only Memory or Flash Memory and the like. A computer system that contains the memory or computer readable medium used in the invention can be a single computer or multiple computers distributed in a network.

20 The atomic coordinates of the invention are useful for viewing or manipulating the structure of IMPDH in a conformation that binds IMP, XMP, MOA, NAD, ribavirin, and combinations thereof. The atomic coordinates shown in Tables 2-7 can be readily modified to remove one or more atoms in the structure including, for example, the atomic coordinates for IMP, XMP, MOA, NAD, ribavirin, or any combination thereof such that only a portion of the structure is viewed or manipulated. Other portions of the invention include atoms of IMPDH that are useful in the active site loop, active site that interact with IMP, XMP, MOA, NAD or ribavirin, such as those present in the active site loop, active site flap, or in other residues that interact with the ligands

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as described herein; IMP or atoms thereof that interact with IMPDH; XMP or atoms thereof that interact with IMPDH; NAD or atoms thereof that interact with IMPDH; MOA or atoms thereof that interact with IMPDH; ribavirin or  
5 atoms thereof that interact with IMPDH. A portion of the atomic coordinates useful in the invention need not be a contiguous fragment of IMPDH or its bound ligands. The atomic coordinates can be manipulated or structures viewed on any computer that supports molecular modeling  
10 software such as a personal computer, silicon graphics workstation or super computer.

Portions of IMPDH or its bound ligands can be represented as pharmacophores. As used herein the term  
15 "pharmacophore" is intended to mean a representation of relative position for two or more atoms based on their positions in a molecular structure. In addition to relative position a pharmacophore can represent other characteristics of the atoms including, for example,  
20 charge or hydrophobicity. A representation in a pharmacophore can be a point indicating, for example, the center of the atom or the representation can be a volume indicating, for example, an area in which the atom can reside making a favorable interaction with another atom.  
25 A pharmacophore can also include a volume representing locations where an atom is disallowed, for example, due to unfavorable interactions with another atom.

The atomic coordinates of the invention can be  
30 used in a variety of methods for rational drug design, such as in methods for identifying an inhibitor of IMPDH. Thus, the invention provides a method of identifying an

inhibitor of IMPDH. The method includes steps of: (a) displaying a structure for IMPDH, or a portion thereof, wherein the structure has atomic coordinates shown in Tables 2-7; (b) docking a structure of a candidate  
5 inhibitor to the structure of IMPDH, or the portion thereof; and (c) identifying an inhibitor of IMPDH, wherein the inhibitor has a structure that docks favorably to the structure of IMPDH, or the portion thereof. A structure of IMPDH can be represented with a  
10 pharmacophore of an IMPDH binding site.

As used herein, the term "docking" means a computational means for performing a fitting operation between the candidate inhibitor and a portion of the  
15 structure of IMPDH. Such a portion of the structure of IMPDH can be, for example, a binding pocket.

In one embodiment, the method is used to identify an inhibitor that targets the substrate binding  
20 site to which IMP or XMP bind. Accordingly, the method can be used with a portion of IMPDH that includes atoms that interact with IMP or XMP such as those described in Examples IV and VII. The method can also be used to identify an inhibitor that targets the NAD cofactor  
25 binding site to which NAD or MOA bind. A portion of IMPDH that interacts with MOA and that is useful in a method of the invention can include, for example, atoms that interact with NAD or MOA as described in Examples V and VII. Any portion of the IMPDH structures including,  
30 for example, the active site loop, active site flap or others described herein can be used in a method of the invention.

A structure of a candidate inhibitor can be docked to a binding site of IMPDH to identify an inhibitor that is complementary in shape to the binding site or has favorable electrostatic interactions with the charged groups in the binding site. A candidate inhibitor can be identified based on structural similarity to IMP, XMP, NAD, MOA or ribavirin. For example, a molecular structure database such as the Cambridge Structure Database can be searched to identify molecules having a particular structural attribute of IMP, XMP, NAD, MOA or ribavirin or any other inhibitor that binds to IMPDH.

In one embodiment, the method is used to identify an inhibitor that targets the substrate binding site to which RIBAVIRIN binds. Accordingly, the method can be used with a portion of IMPDH that includes atoms that interact with RIBAVIRIN such as Ser317 hydroxyl, Tyr405 hydroxyl, main chain nitrogen of Ser317, main chain nitrogen of Gly381, main chain nitrogen of Arg382, the carboxylate of Asp358, the side chain of Ile318, hydrogen of Glu408 or hydrogen of Gly409. The method can also be used to identify an inhibitor that targets the NAD cofactor binding site to which MOA binds. A portion of IMPDH that interacts with MOA and that is useful in a method of the invention can include, for example, the carbonyl oxygen of Gly312, the amide nitrogen of Gly314 or the sulfhydryl of Cys319. Any portion of the IMPDH structures including, for example, the active site loop, active site flap or others described herein can be used in a method of the invention.

A structure of a candidate ligand can be docked using algorithms available in the art including, for example, those available in the software applications DOCK (Kuntz et al., J. Mol. Biol. 161:269-288 (1982)) or INSIGHT98 (Molecular Simulations Inc., San Diego, CA). Methods for screening a structural database to identify molecules that bind to IMPDH are described, for example, in Luecke et al., Exp. Parasitology 87:203-211 (1997).

10

An inhibitor that targets IMPDH can be designed to contain a moiety from a ligand that binds the substrate binding site of IMPDH and a moiety from a ligand that binds to the cofactor binding site of IMPDH. The moieties included in such an inhibitor can be portions of ligands that are bound in the structures disclosed herein or can be analogs of any portion of these ligands, so long as the portion or analog is capable of binding to IMPDH when present in the inhibitor. Accordingly, the moieties of an inhibitor so designed will function as binding moieties. The binding moieties can be linked by a third moiety that is capable of taking on a conformation that places the binding moieties in relative orientations similar to those observed in a crystal structure disclosed herein such as those having coordinates set forth in Tables 2-7. As an example, hydroxyl groups on the ribose rings of XMP and NAD, when bound in a ternary complex with IMPDH, both interact with aspartate residues of IMPDH. In particular Asp358 binds to the ribose hydroxyl of IMP or XMP and ASP261 binds to the NAD(H) nicotinamide ribose hydroxyls as shown in Figure 10. The two aspartate residues are

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about 6.5 angstroms apart at the closest point as shown in Figure 10. Accordingly, an inhibitor can be designed having two ribose moieties, or analogs thereof, linked to each other such that they can attain a conformation where  
5 they interact with these aspartates in IMPDH.

A method of the invention can further include a step of docking a candidate inhibitor to a second IMPDH structure. A second IMPDH structure used in a method of  
10 the invention can be a different conformation of the same IMPDH obtained, for example, by binding to different ligands. As described herein, the conformation of *T. foetus* IMPDH differs for the complexes described herein. Furthermore there are differences between the  
15 conformations of IMPDH disclosed herein and those for IMPDH bound to ribavirin phosphate and for IMPDH structures known in the art as set forth herein. Comparison of docking results for two or more different IMPDH conformations can be used to identify an inhibitor  
20 that has favorable binding interactions with IMPDH in multiple conformations. As described herein, the conformation of *T. foetus* IMPDH in a IMPDH-ribavirin complex differs from its conformation in an IMPDH-ribavirin -MOA ternary complex. Furthermore, the  
25 conformation of *T. foetus* IMPDH in a IMPDH-ribavirin complex differs from its conformation in apo IMPDH, IMPDH-IMP complex, IMPDH-XMP, IMPDH-XMP-MOA ternary complex, or IMPDH-XMP-NAD<sup>+</sup> ternary complex. Comparison of docking results for two or more different IMPDH  
30 conformations can be used to identify an inhibitor that has favorable binding interactions with IMPDH in multiple conformations. A structure of apo IMPDH is available in

the protein databank (PDB) under PDB code 1AK5. A structures of IMPDH bound to ribavirin phosphate and a structure of IMPDH bound to ribavirin and MOA in a ternary complex are described herein.

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The crystal structures described herein reveal aspects of IMPDH structure and association with substrate, products and inhibitors previously unrecognized. Based on particular structural features revealed, an inhibitor of IMPDH activity can be designed. Therefore, in one embodiment, the invention provides a method of the invention for identifying an inhibitor of IMPDH can involve displaying a structure for the bound complex of *T. foetus* IMPDH with NAD set forth in Table 5; (b) docking a structure of a candidate inhibitor to said structure, or the portion thereof; and (c) identifying a compound that binds Asp-358 and Asp-261, wherein said compound has a structure that docks favorably to said structure, or portion thereof.

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A second IMPDH structure used in a method of the invention can be from a different organism. By comparing docking interactions for a candidate inhibitor with IMPDH from different organisms, an inhibitor can be identified that is specific for a particular organism. For example, an inhibitor that is specific to *T. foetus* IMPDH compared to IMPDH from a mammal can be identified based on favorable docking of the candidate inhibitor to *T. foetus* IMPDH and less favorable or even unfavorable docking with IMPDH from the mammal. Such an inhibitor can be useful as a therapeutic agent to treat a cow infected with *T. foetus* as set forth below.

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Alternatively, comparison of docking results for IMPDH structures from two or more different organisms can be used to identify an inhibitor that has favorable docking with multiple IMPDH proteins, thereby identifying an  
5 inhibitor having relatively broad specificity. Structures for IMPDH from other organisms that are useful in the invention include, but are not limited to, those for IMPDH from mammals including, for example, humans, primates, non-human primates, Chinese hamster,  
10 agricultural animals such as cow, horse, sheep, goats, pigs; invertebrates, yeast, bacteria, or protozoa. Examples of IMPDH structures from other organisms that are useful in the invention include human type II IMPDH in a ternary complex with 6-Cl-Imp and selenazole adenine  
15 dinucleotide (PDB code 1B30); IMPDH from *S. pyogenes* (PDB code 1ZFJ) and Chinese hamster IMPDH in complex with MOA (PDB code 1Jr1).

The invention provides another method of  
20 identifying an inhibitor of IMPDH. The method involves (a) selecting a candidate compound by performing rational drug design with a set of atomic coordinates set forth in Tables 2-7, wherein said selecting is performed in conjunction with computer modeling; (b) contacting  
25 said compound with IMPDH, and (c) determining the ability of said compound to reduce IMPDH activity, wherein a compound that reduces IMPDH activity is an inhibitor of IMPDH.

30 The ability of a compound to reduce IMPDH activity can be determined using a variety of well known methods. Such methods include those described in Metz et



al. Endocrinology 142:193-204 (2001) and Wilson et al. J. Biol. Chem. 266(3):1665-1671 (1991). Computer modeling can be performed using a variety of well known methods, including commercial modeling packages, such as those  
5 described herein above.

It is understood that the atomic coordinates of IMPDH disclosed herein can also be used for identifying a compound that increases the activity of IMPDH. Such a  
10 compound can be useful, for example, for increasing the viability of a microbe or as a therapeutic agent used to treat a disease or condition that is mediated by IMPDH or that can be reduced by increasing IMPDH activity.

15 An IMPDH inhibitor identified by a method of the invention can be used as a therapeutic agent. A therapeutic agent identified using the methods of the invention can be used to treat a disease or condition that is mediated by IMPDH or that is reduced by  
20 inhibitors of this enzyme such as ribavirin or MOA. Such an agent can be used to treat a mammal, agricultural animal, human, dog, cat or horse. For example, an inhibitor of *T. foetus* IMPDH can be used to treat cows infected with the *T. foetus* protozoan. A therapeutic  
25 agent identified using the methods of the invention can be used as an antiproliferative, antiviral, anticancer or immunosuppressive agent. A therapeutic agent identified using a method of the invention can be useful for treating a cancer such as those causing a benign or  
30 malignant tumor of the breast, prostate, colon, lung, brain or ovary. A therapeutic agent identified using a method of the invention can be useful for treating a

viral infection such as one caused by hepatitis A, B or C; respiratory syncytial virus, HIV or hanta virus. A therapeutic agent identified using a method of the invention can be useful for treating a fungal infection  
5 such as one caused by *Aspergillus*, *Penicillium*, *Alternaria*, *Cladosporium*, and *Fusarium*. A therapeutic agent identified using a method fungal viral infection such as one caused by *Aspergillus*, *Penicillium*, *Alternaria*, *Cladosporium*, and *Fusarium*. A therapeutic  
10 agent identified using a method of the invention can be useful for treating a bacterial infection such as one caused by *Staphylococcus* spp., *Streptococcus* spp., *Haemophilus influenzae*, *Pseudomonas aeruginosa*, enteric Gram-negative bacilli, *Moraxella lacunata*, *Acinetobacter*  
15 spp., *Neisseria gonorrhoeae*, *Branhamella catarrhalis*, *Chlamydia trachomatis*, and anaerobes. A therapeutic agent identified using a method of the invention can be useful for treating a parasitic infection such as one caused by *Acanthamoeba* and *Toxoplasma gondii*. A therapeutic agent  
20 identified using a method of the invention can be useful in combination with other treatments, for example, as an immunosuppressive agent administered following organ or cell transplantation.

25           It is understood that modifications which do not substantially affect the activity of the various embodiments of this invention are also included within the definition of the invention provided herein. Accordingly, the following examples are intended to  
30 illustrate but not limit the present invention.

## EXAMPLE I

Cystallization of *T. foetus* IMPDH with Bound Substrate,  
5                                   Cofactor and Analogs

This example shows expression, purification, and crystallization of *T. foetus* IMPDH with bound IMP, IMP+MPA, XMP+MPA, and XMP+NAD<sup>+</sup>.

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Protein expression and subsequent purification yielded approximately 90 mg of pure and active protein as determined by Coomassie stained SDS PAGE gels and a spectrophotometrically observed increase of NADH when  
15 enzyme is added to IMP and NAD<sup>+</sup> using previously described methods (Digits and Hedstrom, Biochem. 38:2295-2306 (1999)). This yield could be increased substantially by optimizing the fermentation parameters, in particular by supplementing oxygen, as this was the  
20 limiting factor.

A pBAce plasmid (Chin and Wang, Mol. Biochem. Parasitol. 63:221-229 (1994)) containing *T. foetus* IMPDH (Beck et al., Exp. Parasitol. 78:101-112 (1994)) was  
25 transformed into *Escherichia coli* strain H712 (*E. coli* Stock Center, Yale University, New Haven, CT). This bacterial strain is deficient in native IMPDH and requires rich media for growth unless supplemented with a source of GMP or guanosine. Expression of *T. foetus*  
30 IMPDH was achieved by activation of the PhoA promoter under low phosphate conditions using supplemented MOPS minimal media using a modified version of previously

published protocols (Craig et al., Proc. Natl. Acad. Sci. USA 88:2500-2504 (1991); Neidhardt et al., J. Bacteriol. 119:736-747 (1974); Yuan et al., J. Biol. Chem. 265:13528-13532 (1990)). Briefly, the cells were grown  
5 in MOPS media in a 19-liter fermentor (Wheaton Science Products, Millville, NJ.) inoculated with 0.5 liters of overnight MOPS culture of H712 containing the IMPDH plasmid. Temperature was maintained at 37° C, dissolved oxygen (DO) was maintained at greater than 40% with  
10 aeration, stirring, and glucose addition. The cells were harvested at 8 hours when the DO dropped to below 20% at roughly OD600 = 1.5.

The cells were concentrated to 0.5 L by  
15 tangential flow filtration (Millipore, Inc., Bedford, Ma.), pelleted by centrifugation at 6,000 g, then re-suspended in a three fold volume of buffer A (50 mM Tris pH 8, 50 mM KCl, 10% glycerol, and 1 mM 2-mercaptoethanol) supplemented with protease inhibitors  
20 and 1 mM EDTA. The cells were then flash frozen in liquid nitrogen before storage at -85° C. This mixture was lysed by French Press and clarified by centrifugation at 20,000 g. The resulting lysate was then run over a Cibacron blue column on an AKTA FPLC (Amersham-  
25 Pharmacia). Cibacron blue is a dye ligand that selectively binds many proteins that use NAD<sup>+</sup> as a cofactor. The protein was found to elute from the column in a broad peak with a gradient of 50 mM - 1M KCl over 20 column volumes. Protein elution from the column was  
30 optimized by eliminating the gradient and eluting the protein in 1 M KCl. This was followed by dialysis into buffer A and concentration to 15 mg/ml. The protein was

then passed through a monoQ column (Amersham-Pharmacia) using a gradient from 50 mM to 500 mM KCl over 20 column volumes. The resulting protein was >90% pure and was dialyzed in buffer A and concentrated to 30 mg/ml for  
5 storage at -85° C.

The protein was first crystallized by optimizing previously published conditions (Whitby et al., Proteins 36:10666-10674 (1995)) by mixing 10-15  
10 mg/ml protein in buffer A into 2.4 M ammonium sulfate, 100 mM Tris pH 8.0, 10% glycerol, 4 mM PEG 400, and 1 mM 2-mercaptoethanol well solution in 6 µl sitting drops in a 1:1 ratio of well solution to protein at 20° C. Crystals diffracting to higher resolution were obtained  
15 with the substitution of 42% saturated sodium malonate for 2.4 M ammonium sulfate. Additionally, the crystals grew to a larger size without increased mosaicity, and the malonate provided excellent cryo-protection as no other additives were necessary.

20

## EXAMPLE II

### Crystallography Data Collection for of *T. foetus*

25

#### IMPDH Complexes

This example describes data collection for *T. foetus* IMPDH crystal structures with bound IMP, IMP+MPA, XMP+MPA, and XMP+NAD<sup>+</sup>.

30

All of the ligands were co-crystallized with the exception of NAD<sup>+</sup> and XMP. In the NAD<sup>+</sup>+XMP structure,

the  $\text{NAD}^+$  and XMP were added to five to seven day old crystals and allowed to soak for five days before data collection. Attempts were made to generate XMP covalently attached to the active site cysteine (E-XMP\*) by addition of IMP to IMPDH in a reaction buffer containing  $\text{NAD}^+$  and MOA using methods previously described. The resulting x-ray structure was identical to the XMP+MPA co-crystal structure: there was clearly an oxygen atom on the C2 of XMP, but no covalent bond with the active site cysteine could be discerned.

Diffraction quality crystals grew within five days and although the crystal morphology changed due to the substitution of malonate for sulfate, the space group remained P432 (Figure 1). The cryo-frozen crystals diffracted from 1.95 to 2.2 Å using synchrotron radiation. A randomly selected test set of diffraction data (5% of all structure factors) was set aside for  $R_{\text{free}}$  calculations. All model building was carried out with the program O, and the program CNS was used for refinement. The original *T. foetus* apo structure was used as the initial model for all structures allowing unbiased building of the active site loop and flap. One round of rigid body refinement and simulated annealing was followed by several rounds of energy minimization, B factor refinement, model building, and water picking. Composite omit,  $2F_o - F_c$ , and  $F_o - F_c$  maps were generated to guide model building. The program PROCHECK was used to validate the structures (Laskowski et al., J. App. Cryst. 26:283-291 (1993)). Crystal, refinement, and PROCHECK statistics are presented in Table 1.

Initial diffraction of *T. foetus* IMPDH using the published ammonium sulfate crystallization conditions only reached 3.2 Å using a RAXIS IV detector. The modified conditions improved resolution to 2.45 and  
5 resolution was further improved using synchrotron radiation. Synchrotron data were collected at the Stanford Synchrotron radiation laboratory (SSRL) beam line 9-1 and at The Advanced Light Source, Lawrence Berkeley National Laboratory (ALS) beam line 5.0.2. X-  
10 ray data collection, reduction and refinement statistics can be found in Table 1. Diffraction data were collected under cryo conditions using colorless crystals ranging in size from 0.4 to 0.8 mm. The crystals were loop-mounted and flash-cooled to -170° C in the nitrogen stream. The  
15 data were collected from single crystals and integrated and scaled in the Denzo-Scalepack package (Otwinowski, *Data Collection and Processing*, SERC Daresbury Laboratory, Warrington, UK, pp. 56-62 (1993)). The published apo structure (Whitby et al., Biochem.  
20 36:10666-10674 (1997)) was used as an initial model for all co-crystals, followed by rigid body and simulated annealing refinement. Several rounds of model building, energy minimization and B-factor refinement were then performed with the programs O (Jones et al., Acta Cryst.  
25 A47:110-119 (1991)) and CNS (Brunger et al., Acta Cryst. D54:905-921 (1998)).

## EXAMPLE III

Model Building for *T. foetus* IMPDH with bound IMP,  
5 IMP+MPA, XMP+MPA, and XMP+NAD<sup>+</sup>

This example describes model building for  
*T. foetus* IMPDH with bound IMP, IMP+MPA, XMP+MPA, and  
XMP+NAD<sup>+</sup>.

10

All IMPDH are homotetramers in solution under  
physiological conditions. In the cubic P432 spacegroup,  
this catalytic tetramer is formed by the crystallographic  
four-fold axis (Figure 2). The active site loop,  
15 residues 313-330, was modeled in all but the XMP+NAD<sup>+</sup>  
bound structure, which lacks residues 318-321. This loop  
is highly mobile, in part due to three glycine residues  
(residues 314-316) near the active site cysteine.  
Additionally, this loop has not been stabilized by  
20 covalently binding a substrate intermediate or inhibitor,  
resulting in weak electron density and high B factors.  
Visualization using electron density maps at lower  
contouring levels (0.5-0.8  $\sigma$ ) resulted in continuous or  
nearly continuous density throughout backbone of the  
25 active site loop (Figure 3) with the exception of the  
NAD<sup>+</sup> structure.

Furthermore, a larger portion of the active  
site flap (residues 408-433) was ordered in these  
30 structures in comparison to previous *T. foetus*  
structures. However, the distal portion of this loop was  
not modeled. Although there was scattered density for



the 120-residue CBS domain, it was not contiguous and despite the improved resolution, this domain was not included in the model. Only the *S. pyogenes* structure contains the entire CBS domain (Zhang et al., Biochem.  
5 38:4691-4700 (1999)).

The substrate IMP, product XMP, cofactor NAD<sup>+</sup>, and inhibitor MOA hetero-atoms in the structures presented here were placed into the apo model only when  
10 positive density was observed in F<sub>o</sub>-F<sub>c</sub>, 2F<sub>o</sub>-F<sub>c</sub>, and composite omit maps. The XMP was taken from the original *T. foetus* XMP structure (Whitby et al., *supra*, (1997)) and the IMP model was derived from this XMP structure. The NAD<sup>+</sup> model was obtained from the phosphoglycerate  
15 dehydrogenase structure (Schuller et al., Nat. Struct. Biol. 2:69-76 (1995)) and the MOA model from the Chinese hamster IMPDH structure (Sintchak et al., Cell 85:921-930 (1996)). The IMP, XMP, and MOA hetero-atoms were fitted into density using O and minimized in CNS. The  
20 coordinates for NAD<sup>+</sup> were fitted as above and subsequently submitted to the Dundee PRODRG Server (van Aalten et al., J. of Computer Aided Mol. Design 10:255-262 (1996)) for minimization and CNS topology file generation prior to refinement in CNS.

25

A cis peptide bond not previously described for IMPDH was located in all structures between Gly290 and Asn291 and is located within 7 Å of the nicotinamide portion of the NAD<sup>+</sup> cofactor. This was present but not  
30 described in the *T. foetus* model co-crystallized with XMP (Whitby et al., *supra*, (1997)) but absent in all other structures to date. The cis bond appears to cause the

chain to turn away from the active site, preventing it from entering the active site. All other IMPDH x-ray structures have this same turn but a cis peptide has not been reported in those structures.

5

A novel potassium ion was also identified in all structures, approximately 9 Å away from the cis peptide. This ion is coordinated by the backbone carbonyl of Phe266, the side chain carboxyl oxygens of Asp264, and the following atoms of a neighboring monomer: backbone carbonyls of Gly20 and Asn420, and the Ser22 hydroxyl oxygen (Figure 4). The potassium ion also lies near the NAD<sup>+</sup> binding site and appears to stabilize the monomer-monomer interface as well as the cofactor binding site, but it does not make direct contact with NAD<sup>+</sup> (Figure 5).

A strong electron density peak was found extending from the active site cysteine thiol in the IMP and IMP+MPA bound structures. This appears to be a result of oxidation to sulfenic acid (Cys-SOH) from oxygen exposure during crystal formation and extended incubation prior to cryo-cooling for data collection. This type of oxidation has been previously described for NADH peroxidase (Stehle et al., J. Mol. Biol. 221:1325-1344 (1991)). Although it is interesting that the cysteine was modified only in the IMP-bound structures, this could be an artifact of crystallization as the active site cysteine was not resolved in the XMP+NAD structure, and the XMP+MPA structure had poor density around the cysteine.

30

## EXAMPLE IV

Substrate and Product Binding to *T. foetus* IMPDH

5           This examples describes substrate and product  
binding to *T. foetus* IMPDH.

          In all complex structures presented herein, the  
substrate/product sugar hydroxyls are hydrogen bonded to  
10 the carboxyl side chain of Asp358 as well as two waters.  
The purine O6 accepts a hydrogen-bond from the amide  
nitrogens of Glu408 and Gly409. The side chain of Ile318  
makes van der Waals contact with the base. The  
nucleotide phosphate group is coordinated by the hydroxyl  
15 of Tyr405, backbone nitrogens of Ser317 Gly381, and  
Arg382, and three waters.

          In the IMP complex structure, the purine N1 and  
N3 both form hydrogen bonds with waters. The water in  
20 contact with N1 is bridging it to the backbone carbonyl  
of Glu431, which is 4.79 Å from the N1 as well as Gln324.  
This portion of the active site flap was modeled into  
relatively poor density but the water is clearly  
observed, as well as the backbone from residue 429-431.  
25 The water on N3 is bridging it to the backbone nitrogen  
of Gly316. The phosphate group is coordinated by the  
hydroxyl and the main chain nitrogen of Ser317. The  
IMP+MPA complex differs from the IMP structure in that  
the purine N1 is forming a direct hydrogen bond with the  
30 Glu431 carboxylate oxygen. The other Glu431 carboxylate  
oxygen is in contact with the MOA ring hydroxyl.

Only in the XMP+MPA structure is the backbone carboxyl of Glu431 in direct contact with N1 and the active site flap is not shifted in this structure. The XMP+NAD<sup>+</sup> complex structure is also characterized by the  
 5 backbone carbonyl of Glu431 in direct contact with the purine N1. As in the IMP bound structure, the hydroxyl of Ser317 is pointing toward the XMP phosphate. However, the main chain nitrogen of Ser317, which was coordinating the water hydrogen bonding with N3 in the IMP structure,  
 10 has moved 0.37Å further away from the substrate and the water is no longer present.

Binding in the substrate-binding pocket is characterized by subtle conformational changes when  
 15 binding IMP vs. XMP. Furthermore, a comparison with other IMPDH structures reveals few changes to the active site across species. IMP binds to the *S. pyogenes* enzyme in a nearly identical fashion as it binds to the *T. foetus* enzyme. Most noticeably, the purine ring system of the  
 20 *S. pyogenes* IMP is rotated away from the catalytic Cys310. In *T. foetus* IMPDH, the ring system does not rotate away. Instead, it is the active site Cys319 that is displaced 1.3 Å from the catalytically active conformation. A structural alignment of *T. foetus*, *S.*  
 25 *pyogenes*, and Chinese hamster IMPDH shows that the active site loops are almost identically positioned. Based on surrounding charges, bond distances, and geometry, we believe that there is a cation present in the bacterial structure at the position marked as water 179 in the  
 30 coordinate entry (Zhang et al., *supra*, (1999)). Because the active site cysteine is displaced in the IMP-bound structure of the protist, the Cys319 backbone carbonyl

disrupts the ion binding pocket. In the *T. foetus* XMP+MPA structure, the XMP C2 keto group causes the active site cysteine to move even further into the cation binding pocket.

5

Human type II IMPDH has the *T. foetus* Lys310 and Glu431 substituted with arginine and glutamine, accounting for part of the difference in sensitivity to MOA (Digits and Hedstrom, *supra*, (1999)). Glu431 is  
 10 located near the N1 nitrogen of the IMP. In the structures presented here, only the IMP+MPA structure shows the side chain interacting with partially positively charged groups on both the IMP and MOA rings. In the other *T. foetus* structures, as well as the Chinese  
 15 hamster and human type II structures, Glu431 is pointed away from the IMP, and toward the MOA or SAD inhibitors, leaving the main chain carbonyl pointed at the IMP, XMP, or 6-Cl IMP. The hamster Gln441 side chain is within hydrogen bonding distance of the MOA ring hydroxyl. The  
 20 lysine or corresponding arginine is pointing between the IMP sugar hydroxyls and the MOA or cofactor. Because the arginine side chain is longer, they are near hydrogen bonding distance with one of the ribose hydroxyls of IMP and near the methyl group on the MOA ring.

25

RMS alignments of the substrate and product complex structures show very little movement in the core of the protein as well as the ordered portions of the active site flap. Unfortunately, the structures  
 30 presented here have 10 to 14 residues missing from the active site flap, making characterization difficult. A possible explanation for this disorder is described

below. The majority of conformational differences are located at the active site loop. The active site loop was resolved in all structures with the exception of the NAD<sup>+</sup>XMP co-crystal. In all cases, the loop is not well  
5 ordered with high B-factors, but overall, little movement is observed in the protein backbone of these structures with the exception of the IMP+MPA complex.

In the IMP+MPA structure, the side chains of  
10 the active site flap residues 431 to 434 move away from the active site to allow Glu431 to rotate around the Ca-C main chain bond and form hydrogen bonds with the IMP N1 and the MOA ring hydroxyl. The active site loop residues 320 to 323 shift away from the substrate+inhibitor  
15 complex with the Arg322 alpha carbon moving 7.5 Å from its position in the XMP+MPA model. It is unclear from these structures what is driving this movement of the loop, as these residues do not appear to be directly involved in substrate or cofactor binding. The nearest  
20 of these residues, Thr321, is 6.6 Å away from the MOA in the XMP+MPA structure. This complex is unlikely to occur under physiological conditions since NAD<sup>+</sup> has a far greater binding affinity than MOA. However, MOA does make a useful cofactor analog for the nicotinamide  
25 portion of the NAD<sup>+</sup> binding site. This unique pairing may be useful in structure based drug design since a structure containing unreacted substrate and cofactor may be more difficult to obtain.

## EXAMPLE IV

Cofactor and Inhibitor Binding to *T. foetus* IMPDH

This example describes cofactor and inhibitor  
5 binding to *T. foetus* IMPDH.

In the two MOA complex structures (IMP+MPA and  
XMP+MPA), the inhibitor is bound in a similar manner  
(Figure 6a and b). One difference, however, is that the  
10 side chain of Glu431, which is hydrogen bonding with both  
the IMP and MOA, is shifted away from the product-  
inhibitor complex in the XMP+MPA structure. This may be  
caused by the stronger partial negative charge on the XMP  
due to the keto group at the C2 position of the base.  
15 The main chain nitrogen of Gly314 has moved from 3.26 Å  
to 3.64 Å away from the MOA ring O1. The nicotinamide  
portion of the NAD<sup>+</sup> cofactor stacks with the XMP purine  
moiety and the nicotinamide oxygen hydrogen-bonds with  
the Gly314 nitrogen in the same manner as the MOA  
20 inhibitor. Additionally, the nicotinamide phosphate  
forms bonds with the hydroxyls of Ser262 and Ser263, as  
well as the main chain nitrogen of Ser263. The  
carboxylic acid tail of MOA also binds the Ser263  
hydroxyl and nitrogen. The nicotinamide sugar hydroxyls  
25 form hydrogen bonds with Asp261. The NAD<sup>+</sup> adenosine ring  
stacks between the side chains of Trp269 and Arg241.  
Arg241 also forms hydrogen bonds with the adenosine  
phosphate group.

30 Shown herein is the first IMPDH structure with  
both the XMP product and the NAD<sup>+</sup> cofactor bound.  
Although the human type II structure has 6-Cl IMP and the

NAD<sup>+</sup> analog SAD bound in the respective substrate and cofactor binding sites, the 2.9 Å structure left some ambiguity in the positioning of the SAD molecule (Colby et al., Proc. Natl. Acad. Sci. USA 96:3531-3536 (1999)).

5 At 2.15 Å and with good electron density in the cofactor binding site, we were able to accurately place the cofactor (Figure 8). Although the cofactor lies near the monomer-monomer interface, it does not make contact with the neighboring subunit in the *T. foetus* tetramer. The

10 nearest residue is Ile27, 4.7 Å away from the adenosine portion of the cofactor. This is in contrast to the human structure where the neighboring monomer makes contact with the adenosine ring. The nicotinamide sugar hydroxyls in the *T. foetus* structure form hydrogen bonds

15 with Asp261 and two waters in the same manner as the substrate ribose hydroxyls interact with Asp358. Asp261 is completely conserved across species. In the human structure the cofactor sugar is further from the nicotinamide plane and one of its hydroxyls is out of

20 reach of the human Asp274.

The proximal portion of the active site flap lies near the cofactor but the electron density is too ambiguous to discern any contacts. Similarly to the

25 human type II structure, the adenosine portion of the cofactor is stacked between Arg241 and Trp269. These residues correspond to His253 and Phe282 of human type II IMPDH, and Arg253 and Tyr282 of human type I IMPDH. It is clear that this stacking is conserved in both the

30 mammalian and *T. foetus* structures. Interestingly, the *S. pyogenes* model contains threonine and glycine in these positions, and with the exception of *P. furiosus*, which



contains arginine and lysine residues, respectively, no bacterial sequence contains a stacking partner for the IMPDH cofactor at this location. This suggests that bacterial enzymes may have an alternate cofactor binding mechanism and may be the reason why the bacterial enzyme has a lower affinity for NAD<sup>+</sup>. If the NAD<sup>+</sup> adenosine ring is indeed not involved in base stacking in the bacterial structure, an effective inhibitor may be a mono-nucleotide nicotinamide derivative.

10

MPA does not appear to trap the covalently bound product. The inhibitor MOA binds to IMPDH in the nicotinamide portion of the cofactor-binding pocket using many of the same binding partners as the cofactor. The cofactor NAD<sup>+</sup> binds to IMPDH with many more interactions and therefore has a greater binding affinity to the enzyme when substrate is bound. Our failure to generate the covalent intermediate may be due to *T. foetus* IMPDH having a far faster release of E-XMP\* than the mammalian enzyme (Dignits and Hedstrom, *supra*, (1999)) or it may simply be that MOA does not inhibit XMP disassociation from *T. foetus* IMPDH. MOA does bind the *T. foetus* enzyme with significantly lower affinity than the mammalian form.

25

A novel potassium binding site was also identified. A high positive difference density peak in the F<sub>o</sub>-F<sub>c</sub> electron density map was observed at a dimer interface near the cofactor-binding site. This peak was surrounded by four backbone carbonyl oxygens and the carboxylate of Asp264 (Figure 4). The charge environment indicates a cation, and the coordination and B factor are

30

a probable indication of a potassium ion. This potassium is located too far from the substrate and cofactor to affect catalysis or to directly affect binding (Figure 5). However, it may aid in cofactor binding by  
 5 stabilizing adjacent residues, which are involved in cofactor binding. Additionally, the monovalent cation likely stabilizes the dimer interface. This ion is present in all structures presented here (Figure 9a). The ion was not noted in the previous *T. foetus*  
 10 structures (Whitby et al., *supra*, (1995); Whitby et al., *supra*, (1997)), but there was a water molecule placed at that location in the *T. foetus* XMP-bound structure. It is possible that the previous *T. foetus* structures were not at sufficient resolution to detect the ion.

15

This ion appears to be unique to *T. foetus* IMPDH and is not likely to represent the second ion binding site proposed for the *E. coli* enzyme (Kerr et al., Arch. Biochem. Biophys. 375:131-137 (2000)). A  
 20 protein alignment shows that the *T. foetus* Asp264 is substituted with glutamine in most eukaryotic IMPDH and with histidine in prokaryotic IMPDH. A structural alignment with the human and bacterial structures (Colby et al., *supra*, (1999); Zhang et al., *supra*, (1999)) shows  
 25 that the substitutions would cause steric and charge clashes with the potassium (Figure 9 b and c). Absence of this ion does not appear to affect the secondary structure of either human or bacterial IMPDH (Figure 9d). The potassium ion reported in Chinese hamster IMPDH was  
 30 not detected in these structures. This is likely due to the highly mobile nature of the active site loop that forms part of the *T. foetus* IMPDH potassium binding site.

Additionally, *T. foetus* IMPDH retains 80% of its activity in the absence of potassium (Verham et al., Mol. Biochem. Parasitol. 24:1-12 (1987)) and it has been shown that other cations can activate bacterial IMPDH (Kerr et al., supra, (2000)). It is possible that this ion only binds in the covalently bound intermediate or similar conformations.

Possible  $\pi$  stacking at crystal contacts disorder the active site flap. The entire active site flap has not been resolved in any IMPDH structure to date. It had been hypothesized that a *T. foetus* structure bound with substrate and MOA would resolve this loop (Digits and Hedstrom, Biochem. 39:1771-1777 (2000)). This was based on fluorescence assays where a single tryptophan on the active site flap was monitored under increasing concentrations of MOA. The resulting decrease in fluorescence suggested the tryptophan, as well as the flap, may have become ordered. Unfortunately, the flap remained disordered in all structures presented here. The reason for this may be that Trp416 is involved in  $\pi$  stacking with Trp406, Arg412, and the corresponding residues of a neighboring, symmetry related monomer. This symmetry related monomer is not part of the catalytic tetramer and the space occupied by Trp416 is on a crystallographic two-fold axis, implying that each monomer can only occupy this site at 50%. Although this area has weak electron density, density large enough to fit the tryptophan side chain and the resulting spacing is reasonable for a single copy of Trp416 to fit in this space. Additional density suggests an alternate conformation for this tryptophan, adjacent to the peptide

bond between Ser83 and Gln84 (Figure 10). This tryptophan is physically able to fit in either position; however, residues 414 and 415, which also move as a result of the two conformations, have little density in either conformation and there is no usable density beyond Trp416 in either conformation. We believe that the residues beyond Trp416 are disordered, in part, because of the multiple conformations of this tryptophan. Mutation of this residue may aid in resolving this loop but it is also likely to inhibit crystallization due to the loss of this crystal contact. Furthermore, the tryptophan may be stabilizing the active site flap residues preceding it, and a mutation may cause a loss in resolution of a greater portion of the loop as is the case in most other IMPDH structures. It is possible that addition of adenosine or its analogs to this mutant protein could bridge the  $\Pi$  systems of the two monomers, however this hypothesis has not been tested.

20

#### EXAMPLE V

##### Proposed Structural Mechanism for *T. foetus* IMPDH

This example describes the proposed structural mechanism for *T. foetus* IMPDH.

An improvement upon the original *T. foetus* 2.3 Å apo structure showing the active site loop would increase the understanding of the catalytic mechanism of IMPDH. This is likely due to the increased flexibility of the *T. foetus* loop due to the three consecutive glycine residues present in the loop. The *T.*

*foetus* Gly315 is substituted with a proline in *B. burgdorferi*, likely providing the active site loop with increased stability. It appears that the *T. foetus* loop is stabilized only by occupation of the active site. If  
5 the apo *T. foetus* active site loop conformation is similar to that of the *B. burgdorferi* loop, a hypothesis of the IMPDH structural mechanism can begin to be described.

10           The kinetic mechanism is random-in ordered-out with NADH leaving before XMP is released from the enzyme. When IMP binds the enzyme first, the enzyme is in an open conformation and IMP has easy access to the active site. When NAD<sup>+</sup> binds first, the nicotinamide group blocks one  
15 entrance to the active site. Now, IMP must instead use the opening defined by the active site loop in its open configuration. An alignment of the apo *B. burgdorferi* structure and the *T. foetus* IMP-bound structure reveals an opening leading to the active site that is  
20 approximately 10 Å wide and 12 Å tall between the loop and the flap (Figure 11). This opening, together with the flexible nature of the loop and the flap, would allow access to the active site. Additionally, Ser317 and the hydrophobic Ile318 are solvent-exposed. These two amino  
25 acids may serve as a bait to draw IMP into the structure. When IMP binds in the active site, it causes the loop to close and Ser317 to bind to the phosphate, while the Ile318 side chain forms hydrophobic interactions with the  
30 substrate IMP or the product XMP must wait for NADH to leave before either nucleotide can dissociate from the enzyme.

With the exception of the IMP+MPA structure, there are no active-site bonds present in the IMP structure that are not present in the product+inhibitor or product+cofactor structure. It appears that the enzyme relies on the release of the cofactor and subsequent solvent exposure of the product with its newly formed keto group and the corresponding partial negative charge, in order for product to be released. This observation confirms kinetic studies of the *T. foetus* enzyme that show the off-rate of IMP at 7.7 s<sup>-1</sup> and that of XMP at 17 s<sup>-1</sup> without cofactor bound (Digits and Hedstrom, *supra*, (1999)). Additionally, the nicotinamide ring of NADH would lie near the O2 carbonyl of the product XMP; this newly developed partial charge may act to push the now less polar ring out of the active pocket.

The identification of a cation at the active site of the Chinese hamster structure and the possibility of a cation in the same location in the *S. pyogenes* structure are intriguing. An ion present when the substrate is bound but unreacted and still present when product is covalently bound might indicate that this ion is important in placing the active site cysteine in an orientation required for catalysis.

In the bacterial structure, Thr310 makes hydrogen bonds with an ordered water and the Glu420 main chain. This creates a stabilizing effect for several residues in the loop as well as the C-terminal portion of the active site flap. Examination of the other bacterial structure, *B. burgdorferi* in the apo conformation,

reveals that the threonine is not in position to form bonds with the active site flap, resulting in a larger section of the C-terminal portion of the flap to be disordered. It appears that this increased stability in the *S. pyogenes* active site loop, and of Cys310 in particular, causes the purine to rotate away from the active site cysteine. In the *T. foetus* structure, Thr310 is substituted with Ile320 and this hydrophobic residue is likely to destabilize the active site loop in this conformation, allowing the cysteine to move rather than the purine. This threonine is conserved in prokaryotes while most eukaryotes carry the isoleucine. Apparently, it is the covalent bond with the substrate that is the stabilizing factor in the Chinese hamster model and it would not be surprising to find that the Ile-Thr substitution plays a role in prokaryote vs. eukaryotic enzyme kinetics.

## EXAMPLE VI

### Steady State Kinetic Analysis of *T. foetus* IMPDH

Steady-state kinetic analysis of *T. foetus* IMPDH using IMP as a substrate was performed using a spectroscopic method. Initial velocity measurements were taken with increasing amounts of IMP and plotted as a Michaelis-Menten graph (Figure 12).

From the plot, an apparent  $K_m$  of 3.0 M was calculated for IMP. RMP, a competitive inhibitor for the

substrate IMP, was then assayed for inhibition of the protozoan enzyme with increasing concentrations of RMP. These data were graphed as a Dixon plot (Figure 13). The apparent  $K_i$  for RMP was determined to be 65 nM.

5

Steady-state kinetic analysis of *T. foetus* IMPDH was performed with 4.5 M enzyme in a reaction buffer containing 100 mM KCL, 50 mM Tris pH 8.0, 1 mM DTT and 1 mM  $\text{NAD}^+$ . Reactions were initiated with the addition of IMP, and the production of NADH was monitored spectrophotometrically at 340 nm ( $340 = 6.22 \text{ mM}^{-1} \text{ cm}^{-1}$ ) using a Perkin Elmer Lambda 40 (EG&G, Inc., Wellesley, Ma) spectrophotometer at 25°C. For determination of the apparent  $K_m$  value for IMP, the concentration of IMP was varied from  $K_m/2$  to  $10K_m$  with the  $\text{NAD}^+$  concentration fixed at 1 mM. The initial velocity at various IMP concentrations was measured and was fit to the Michaelis-Menten equation by Sigma plot (SPSS Inc., Chicago, Il.). Since RMP is known to be a competitive inhibitor with IMP, the apparent inhibition constant  $K_i$  of RMP was estimated using a Dixon plot. In the experiments, RMP concentration was varied while IMP concentration remained fixed at 40 M, and the  $\text{NAD}^+$  concentration was 1 mM. The initial velocities at various RMP concentrations were determined by the extraction of the linear portion of the reaction time-course. By plotting  $1/v$  vs. inhibitor concentration, the apparent inhibition constant  $K_i$  was calculated using the following equation:

30 
$$1/v = (K_m/V_{\max}) (K_i [\text{IMP}]) [\text{RMP}] + 1/V_{\max} (1 + (K_m/[\text{IMP}])))$$



## EXAMPLE VII

Crystallization to *T. foetus* IMPDH

5

with Ribovirin

Diffraction quality IMPDH crystals in the space group P432 grew within five days. The cryo-colored crystals diffracted to 1.90 Å for the RMP co-crystal and  
10 to 2.15 Å for the crystal with RMP and MOA using synchrotron radiation. A randomly selected test set of diffraction data (5% of all structure factors) was set aside for Rfree monitoring. The published isomorphous *T. foetus* apo structure (PDB code 1AK5) was used as the  
15 initial model for both structures allowing unbiased building of the active site loop and the active site flap. One round of rigid body refinement and simulated annealing was followed by several rounds of energy minimization, B factor refinement, model building, and  
20 water picking. Composite  $2F_o - F_c$  and  $F_o - F_c$  omit maps were generated to aid in model building. The program PROCHECK was used to validate the structures (Laskowski et al., J. App. Cryst. 26:283-291 (1993)). Crystal, refinement, and PROCHECK statistics are shown in Table 9.

25

IMPDH crystallized as a homotetramer with monomers related by the four-fold crystallographic axis (Figure 14). The active site loop, residues 313-330, was modeled in both the RMP and RMP+MPA structures. The  
30 proximal portion of the active site flap (residues 408 to 416 and 431 to 433) was modeled, while the distal portion (residues 417-430) was disordered. Poor density in the

region of the CBS domain was observed and no attempts were made at modeling this domain. The C-terminal amino acids 484-492 were also added to the original *T. foetus* model and although these nine residues do not appear to  
5 make direct contact with substrate or product, they do lie near the active site of a neighboring monomer in the catalytic tetramer and the backbone carbonyls of residues 485-487 form part of the active site cation binding pocket. Although RMP was clearly observable in the  
10 electron density of both crystal structures, density for MOA, even with saturating concentrations in the crystallization drop, was weak and was therefore modeled at 50% occupancy (Figure 15). B factors for MOA at this level of occupancy were in agreement with the neighboring  
15 RMP atoms.

A cis peptide bond was modeled in both structures between Gly290 and Asn291. It is located near the cofactor binding site but does not appear to be close  
20 enough to directly influence cofactor binding. In addition, a strong peak of electron density was found extending from the active site cysteine sulfur in the RMP bound structure. This appears to be a result of the thiol oxidized to sulfenic acid (Cys-SOH), likely caused  
25 by exposure to oxygen during crystal formation prior to freezing.

As was observed in the IMP bound structure, the phosphate is coordinated with hydroxyls from Ser317 and  
30 Tyr405 as well as main chain nitrogens from residues 317, 381, and 382 (Figure 16). Three solvent waters also form hydrogen bonds with the phosphate. As in all IMPDH

structures, the substrate sugar hydroxyls form strong hydrogen bonds with a conserved aspartate carboxylate (Asp358). Ile318, which in the substrate and product complexes forms hydrophobic interactions with the purine ring, has moved 1.2 Å away from the RMP inhibitor. The RMP amide oxygen forms hydrogen bonds with Glu408 and Gly409. In the RMP+MPA structure the amide nitrogen is hydrogen-bonding to the MOA ring hydroxyl and the MOA inhibitor has moved 0.6 Å from its position in the XMP+MPA structure in the direction of the RMP purine ring derivative. In this position, the MOA ring O2 makes a hydrogen bond with the backbone nitrogen of Gly314, and the C3 oxygen hydrogen bonds with the catalytic sulfhydryl of Cys319.

15

The conformation of the active site loop in the RMP as well as the RMP+MPA structure is different from the loop conformation of the structures with bound substrate or product, resulting in a pocket surrounded by backbone carbonyl oxygens from Gly314, Gly316, and the active site Cys319, as well as carbonyls from Glu485, Gly486 and Gly487 in the neighboring catalytic monomer. A high (7.7 sigma) difference density peak was observed at the center of this pocket indicating the presence of a cation. Both Na<sup>+</sup> and K<sup>+</sup> ions were modeled into this site and minimized in CNS. A large peak of negative difference density was observed when K<sup>+</sup> was modeled as well as high B factors. Because of the high concentration of sodium in the crystallization buffer, the previous observation that a sodium ion binds competitively with K<sup>+</sup> in microbial IMPDH (Kerr et al., Arch. Biochem. Biophys. 375:131-137 (2000)), and B

30

factors that are near that of the neighboring atoms, a Na<sup>+</sup> ion was placed in the final model (Figure 17).

As is described above, *T. foetus* IMPDH binds  
5 ribavirin in the active site substrate pocket. The  
RMP+MPA complex was difficult to obtain, as the MOA  
inhibitor was only observed with saturating amounts of  
MOA present in the crystallization drop. Attempts to  
obtain a co-crystal rather than an MOA soak were  
10 unsuccessful as the levels of MOA necessary to form the  
complex inhibited crystal formation. Although no data  
have been reported on the additive effects of ribavirin  
and MOA, it is unlikely that both inhibitors would occupy  
the substrate and cofactor binding pockets of the active  
15 site simultaneously, despite their distinct binding  
sites. The reason might be that MOA appears to rely on  
stacking its ring against the product XMP purine ring to  
bind to IMPDH and the RMP ring is probably too small for  
effective stacking.

20

A structure of RMP bound to human IMPDH has not  
been made available for direct comparison; however, we  
were able to compare the *T. foetus* RMP structure with the  
Chinese hamster structure that contains a covalently  
25 bound substrate intermediate (Sintchak et al., *supra*,  
(1996)). These structures show a high degree of  
similarity in the conformation of the active site loop,  
recruitment of a catalytic ion, as well as incorporation  
of the C terminal residues of the neighboring catalytic  
30 monomer to create the ion pocket. The reasons behind  
this appear to be the lack of the IMP C2 and N3 in the  
RMP inhibitor, which cause the hydrophobic Ile318, which

normally forms hydrophobic contacts with the purine ring of the substrate or product, to move away from the more polar, less hydrophobic purine derivative. More importantly, with this portion of the purine ring absent, it is now more favorable for the active site cysteine (Cys319) to move into its catalytic position without the need for the  $\text{NAD}^+$  cofactor to bind and for catalysis to occur. This would not be the case with substrate or product present as the Cys319 sulfhydryl would be within 2.8 of the C2 position of IMP or within 1.5 of the oxygen bound to the C2 position of XMP.

It appears that in mammalian IMPDH and the presented *T. foetus* structures, the covalent intermediate is necessary to recruit the ion to the active site whereas the inhibitor ribavirin allows the active site loop to occupy this position without forming a covalent bond with the enzyme. No ion was found in our *T. foetus* IMP bound structure. In the human IMPDH structure with the covalently bound inhibitor 6-Cl IMP, no cation was present because it was necessary for the active site loop to move from the purine ring C2 position to the inhibitor C6 position in order for the active site cysteine to form a covalent bond with the inhibitor. This movement in the loop prevented formation of the ion-binding pocket. Furthermore, the active site loop in the apo *S. pyogenes* structure is in this cation-binding conformation without a covalent intermediate and a possible ion, designated water 179 (PDB accession code 1ZFJ), appears to occupy the same cation position as in the Chinese hamster (PDB accession code 1JR1) and the *T. foetus* structures presented here. The IMP in the bacterial structure is

not covalently bound and the C2 of the purine ring is rotated slightly away from the active site cysteine. In the *T. foetus* IMP structure, it is the loop that moves slightly away from C2 of IMP when compared to the hamster covalently bound structure and the *B. burgdorferi* apo structure.

The bacterial active site loop appears to be stabilized upon substrate binding by Thr310, which also makes hydrogen bonds with the active site flap, both directly and through an ordered water. This threonine is conserved in bacteria but is substituted with an isoleucine in eukaryotes, which appears to disrupt the structural coupling of the active site loop to the active site flap. This results in a partial destabilization of the active site loop allowing the active site cysteine to be displaced instead of the substrate. The bacterial active site loop is in the catalytic position immediately following substrate binding, and this could explain the ten fold higher  $K_{cat}$  compared to the mammalian and *T. foetus* enzymes (24, 2, 1.8 and 4 s<sup>-1</sup> for *S. pyogenes*, *T. foetus*, and human type I and II, respectively) (Dignits and Hedstrom, *supra*, (1999); Zhang et al., *supra*, (1999); Hager et al., Biochem. Pharmacol. 49:1323-1329 (1995)).

25

The mammalian and *T. foetus* enzymes, at some point after substrate binding, must first move the active site loop into position; recruit the active site cation and C-terminal residues of the neighboring monomer before catalysis is possible. These steps may be coupled to cofactor binding. If the positively charged NAD<sup>+</sup> binds over the C2 position of IMP it may expose the substrate

30

C2 to the active site cysteine thiol for subsequent nucleophilic attack. A role for the active site ion may be in stabilization of the active site loop during catalysis. The carbonyl oxygen from the active site Cys319 forms part of the cation binding site. When this site is occupied, the cysteine is in an ideal position to form a covalent bond with the C2 carbon of IMP. The cation-binding site appears to be formed before covalent bonding in bacterial IMPDH but likely occurs during covalent bond formation in mammalian and *T. foetus* IMPDH.

In the steady-state kinetic analysis of *T. foetus* IMPDH, an apparent  $K_m$  of 3.0  $\mu\text{M}$  for IMP was observed. This is consistent with the previously published  $K_m$  value of 1.7  $\mu\text{M}$  from a detailed bisubstrate kinetic analysis (Digits and Hedstrom, *supra*, (1999)). This value is much smaller than the  $K_m$  of 14.2 and 9.2  $\mu\text{M}$ , respectively, for human type I and II IMPDH (Hager et al., *supra*, (1995)) as well as the  $K_m$  of 62  $\mu\text{M}$  for *S. pyogenes* enzyme (Zhang et al., *supra*, (1999)). This result indicates the IMP binds to *T. foetus* IMPDH about 3 to 5-fold tighter than to mammalian enzymes. Interestingly, RMP, a nucleotide inhibitor, was shown to have a  $K_i$  of 65 nM for *T. foetus* IMPDH. This is about 5 to 10-fold lower than the  $K_i$  for human type I and II IMPDH, where the values are 650 nM and 390 nM, respectively (Hager et al., *supra*, (1995)). And it is considerably lower than the  $K_i$  of 6  $\mu\text{M}$  for *S. pyogenes* IMPDH (Zhang et al., *supra*, (1999)). This result is consistent with steady-state kinetic analysis that shows that *T. foetus* IMPDH binds IMP (or the IMP analog RMP)

more tightly than IMPDH from other species. Furthermore, the inhibition studies with RMP demonstrated that specifies specificity for an inhibitor does not occur in IMPDH. Our in vitro studies showed that RMP is a potent  
5 nanomolar inhibitor for *T. foetus* IMPDH and it appears that RMP is more effective against the protist form of IMPDH than the human and bacterial forms. A structural explanation for the 100 fold difference in  $K_i$  between *T. foetus* and *S. pyogenes* IMPDH could not be established  
10 from the highly conserved substrate binding site. The differences in  $K_i$  may be related, at least in part, to the kinetic mechanism. Further in vivo experiments are needed to address whether there is any clinical significance and pharmacological effects of ribavirin on  
15 *T. foetus*-infected cows.

Methods for expression, purification, and crystallization of *T. foetus* IMPDH.

20

Recombinant *T. foetus* IMPDH enzyme was produced from a pBace plasmid (Chin and Wang, *supra*, (1994)) containing the gene for *T. foetus* IMPDH (Beck et al., Exp. Parasitol. 78:101-112 (1994)) that was transformed  
25 into *Escherichia coli* strain H712 (*E. coli* Stock Center, Yale University, New Haven, CT). Expression of *T. foetus* IMPDH was achieved by modifying previously published protocols (Craig et al., Proc. Natl. Acad. Sci. USA 88:2500-2504 (1991); Neidhardt et al., J. Bacteriol.  
30 119:736-747 (1974); Yuan et al., J. Biol. Chem. 265:13528-13532(1990)). Briefly, the cells were grown in MOPS media in a 19-liter fermentor (Wheaton Science



Products, Millville, NJ.) and were inoculated with 0.5 liters of overnight MOPS culture of H712 containing the IMPDH plasmid. The fermentation was kept at 37° C and was maintained by aeration, stirring and glucose addition. .  
5 The dissolved oxygen (DO) was maintained at greater than 40%. The cells were harvested at 8 hours when the DO dropped to below 20% at an OD<sub>600</sub> of roughly 1.5.

The cells were concentrated to 0.5 L by  
10 tangential flow filtration (Millipore, Inc., Bedford, Ma.) and pelleted by centrifugation at 6,000 g. The pellet was re-suspended in a three fold volume of buffer A (50 mM Tris pH 8, 50 mM KCl, 10% glycerol, and 1 mM 2-mercaptoethanol) supplemented with protease inhibitors  
15 and 1mM EDTA, and was then flash frozen in liquid nitrogen before storage at -85° C. This mixture was lysed by French Press and the lysate was clarified by centrifugation at 20,000 g. The supernatant was then run over a cibacron blue column on an AKTA FPLC (Amersham-  
20 Pharmacia). Protein was eluted from the column with 1 M KCl. This was followed by dialysis into buffer A and concentration to 15 mg/ml. The protein was then passed through a monoQ column (Amersham-Pharmacia) using a gradient from 50 to 500 mM KCl over 20 column volumes.  
25 The resulting protein was >90% pure and was dialyzed in buffer A and concentrated to 30 mg/ml for storage at -85°C.

The protein was crystallized at 20°C by mixing  
30 15 mg/ml protein in buffer A into 42% of saturated sodium malonate, 100 mM Tris pH 8.0, 4 mM PEG 400, and 1 mM 2-

mercaptoethanol in 6 $\mu$ l sitting drops in a 1:1 ration of well solution to protein. The protein was also co-crystallized with a ten-fold molar excess of RMP. For the efforts to co-crystallize both RMP and MOA with  
5 IMPDH, saturating levels of MOA were added to newly formed RMP bound crystals. These crystals were allowed to soak for several hours to several days before cryo-mounting.

10                   Throughout this application various publications have been referenced within parentheses. The disclosures of these publications in their entireties are hereby incorporated by reference in this application in order to more fully describe the state of the art to  
15 which this invention pertains.

                  Although the invention has been described with reference to the disclosed embodiments, those skilled in the art will readily appreciate that the specific  
20 experiments detailed are only illustrative of the invention. It should be understood that various modifications can be made without departing from the spirit of the invention.

TABLE 1. Data collection and refinement statistics.

Structure	IMP	IMP+MPA	XMP+MPA	NAD <sup>+</sup> +XMP
Wavelength (Å)	0.97	0.97	0.97	1.00
Resolution Range (Å)	50 - 2.2	50 - 1.95	50 - 2.2	20 - 2.15
Resolution of outer shell (Å)	2.2-2.34	1.95-2.07	2.2-2.34	2.15-2.28
R (R <sub>free</sub> ) (%)	24.9 (27.1)	24.0 (26.8)	22.5 (25.6)	22.3 (24.6)
Unique reflections	32,418	45,540	32,987	33,857
Total observations	996,397	1,036,471	407,857	734,853
I/σ <sub>I</sub> all/outer shell	21.7/2.13	25.88/1.82	21.38/2.88	19.03/2.22
R <sub>sym</sub> all/outer shell (%)	6.4/59.6	5.7/66.8	6.6/53.8	8.0/57.8
Completeness all/outer shell (%)	99.9/99.8	99.0/95.7	99.5/98.7	98.4/95.9
Degrees collected	37.5	37.5	20	30
Amino acid residues in model	2-101, 222-416, 431-483	2-106, 222-416, 430-483	2-101, 222-417, 428-483	2-101, 222-317, 322-416, 428-483
Number of water molecules	159	202	183	172
Cell dimensions a=b=c (Å)	154.4	153.5	155.1	153.8
Bond length dev. (Å)	0.006	0.006	0.005	0.007
Bond angle dev. (°)	1.2	1.2	1.1	1.3
Dihedral angle dev. (°)	22.9	22.2	22.5	23.0
Improper angle dev. (°)	0.71	0.70	0.67	0.80
Ramachandran core/allowed/ generously allowed (%)	91.9/7.8/0.3	92.1/7.9/0.0	90.7/9.0/0.3	91.7/7.9/0.3
Mosaicity (°)	0.60	0.65	0.40	0.70

```

HEADER      OXIDOREDUCTASE                      08-AUG-02   1ME9
TITLE       INOSINE MONOPHOSPHATE DEHYDROGENASE (IMPDH) FROM
TITLE       2 TRITRICHOMONAS FOETUS WITH IMP BOUND
COMPND      MOL_ID: 1;
COMPND      2 MOLECULE: INOSINE-5'-MONOPHOSPHATE DEHYDROGENASE;
COMPND      3 CHAIN: A;
COMPND      4 SYNONYM: IMP DEHYDROGENASE, IMPDH;
COMPND      5 EC: 1.1.1.205;
COMPND      6 ENGINEERED: YES
SOURCE      MOL_ID: 1;
SOURCE      2 ORGANISM_SCIENTIFIC: TRITRICHOMONAS FOETUS;
SOURCE      3 GENE: IMPDH;
SOURCE      4 EXPRESSION_SYSTEM: ESCHERICHIA COLI;
SOURCE      5 EXPRESSION_SYSTEM_COMMON: BACTERIA;
SOURCE      6 EXPRESSION_SYSTEM_STRAIN: H712;
SOURCE      7 EXPRESSION_SYSTEM_VECTOR_TYPE: PLASMID;
SOURCE      8 EXPRESSION_SYSTEM_PLASMID: PBACE
KEYWDS      ALPHA BETA BARREL
EXPDTA      X-RAY DIFFRACTION
AUTHOR      G. L.PROSISE,H.LUECKE
JRNL        AUTH   G. L.PROSISE,H.LUECKE
JRNL        TITL   CRYSTAL STRUCTURE OF T. FOETUS INOSINE
JRNL        TITL 2 MONOPHOSPHATE DEHYDROGENASE IN COMPLEX WITH
JRNL        TITL 3 SUBSTRATE, COFACTOR, AND ANALOGS:STRUCTURAL BASIS
JRNL        TITL 4 FOR THE RANDOM-IN ORDERED-OUT KINETIC MECHANISM
JRNL        REF    TO BE PUBLISHED
JRNL        REFN
REMARK      1
REMARK      2
REMARK      2 RESOLUTION. 2.20 ANGSTROMS.
REMARK      3
REMARK      3 REFINEMENT.
REMARK      3   PROGRAM       : CNS 1.1
REMARK      3   AUTHORS        : BRUNGER,ADAMS,CLORE,DELANO,GROS,GROSSE-
REMARK      3                   : KUNSTLEVE,JIANG,KUSZEWSKI,NILGES, PANNU,
REMARK      3                   : READ,RICE,SIMONSON,WARREN
REMARK      3
REMARK      3 REFINEMENT TARGET : ENGH & HUBER
REMARK      3
REMARK      3 DATA USED IN REFINEMENT.
REMARK      3   RESOLUTION RANGE HIGH (ANGSTROMS) : 2.20
REMARK      3   RESOLUTION RANGE LOW  (ANGSTROMS) : 19.77
REMARK      3   DATA CUTOFF              (SIGMA(F)) : 0.000
REMARK      3   OUTLIER CUTOFF HIGH (RMS(ABS(F))) : NULL
REMARK      3   COMPLETENESS (WORKING+TEST) (%) : 99.8
REMARK      3   NUMBER OF REFLECTIONS              : 32418
REMARK      3
REMARK      3 FIT TO DATA USED IN REFINEMENT.
REMARK      3   CROSS-VALIDATION METHOD           : THROUGHOUT
REMARK      3   FREE R VALUE TEST SET SELECTION   : RANDOM
REMARK      3   R VALUE                          (WORKING SET) : 0.248
REMARK      3   FREE R VALUE                      : 0.273
REMARK      3   FREE R VALUE TEST SET SIZE (%) : 5.200
REMARK      3   FREE R VALUE TEST SET COUNT       : 1691
REMARK      3   ESTIMATED ERROR OF FREE R VALUE   : 0.007
REMARK      3
REMARK      3 FIT IN THE HIGHEST RESOLUTION BIN.

```

```

REMARK 3 TOTAL NUMBER OF BINS USED : 6
REMARK 3 BIN RESOLUTION RANGE HIGH (A) : 2.20
REMARK 3 BIN RESOLUTION RANGE LOW (A) : 2.34
REMARK 3 BIN COMPLETENESS (WORKING+TEST) (%) : 99.80
REMARK 3 REFLECTIONS IN BIN (WORKING SET) : 5035
REMARK 3 BIN R VALUE (WORKING SET) : 0.2770
REMARK 3 BIN FREE R VALUE : 0.3040
REMARK 3 BIN FREE R VALUE TEST SET SIZE (%) : 4.90
REMARK 3 BIN FREE R VALUE TEST SET COUNT : 262
REMARK 3 ESTIMATED ERROR OF BIN FREE R VALUE : 0.019
REMARK 3
REMARK 3 NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK 3 PROTEIN ATOMS : 2685
REMARK 3 NUCLEIC ACID ATOMS : 0
REMARK 3 HETEROGEN ATOMS : 24
REMARK 3 SOLVENT ATOMS : 145
REMARK 3
REMARK 3 B VALUES.
REMARK 3 FROM WILSON PLOT (A**2) : 28.10
REMARK 3 MEAN B VALUE (OVERALL, A**2) : 40.20
REMARK 3 OVERALL ANISOTROPIC B VALUE.
REMARK 3 B11 (A**2) : 0.00000
REMARK 3 B22 (A**2) : 0.00000
REMARK 3 B33 (A**2) : 0.00000
REMARK 3 B12 (A**2) : 0.00000
REMARK 3 B13 (A**2) : 0.00000
REMARK 3 B23 (A**2) : 0.00000
REMARK 3
REMARK 3 ESTIMATED COORDINATE ERROR.
REMARK 3 ESD FROM LUZZATI PLOT (A) : 0.30
REMARK 3 ESD FROM SIGMAA (A) : 0.22
REMARK 3 LOW RESOLUTION CUTOFF (A) : 5.00
REMARK 3
REMARK 3 CROSS-VALIDATED ESTIMATED COORDINATE ERROR.
REMARK 3 ESD FROM C-V LUZZATI PLOT (A) : 0.34
REMARK 3 ESD FROM C-V SIGMAA (A) : 0.25
REMARK 3
REMARK 3 RMS DEVIATIONS FROM IDEAL VALUES.
REMARK 3 BOND LENGTHS (A) : 0.006
REMARK 3 BOND ANGLES (DEGREES) : 1.20
REMARK 3 DIHEDRAL ANGLES (DEGREES) : 22.80
REMARK 3 IMPROPER ANGLES (DEGREES) : 0.72
REMARK 3
REMARK 3 ISOTROPIC THERMAL MODEL : RESTRAINED
REMARK 3
REMARK 3 ISOTROPIC THERMAL FACTOR RESTRAINTS. RMS SIGMA
REMARK 3 MAIN-CHAIN BOND (A**2) : 1.270 ; 1.500
REMARK 3 MAIN-CHAIN ANGLE (A**2) : 2.150 ; 2.000
REMARK 3 SIDE-CHAIN BOND (A**2) : 1.930 ; 2.000
REMARK 3 SIDE-CHAIN ANGLE (A**2) : 2.840 ; 2.500
REMARK 3
REMARK 3 BULK SOLVENT MODELING.
REMARK 3 METHOD USED : FLAT MODEL
REMARK 3 KSOL : 0.36
REMARK 3 BSOL : 40.24
REMARK 3
REMARK 3 NCS MODEL : NULL

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REMARK 3
REMARK 3 NCS RESTRAINTS. RMS SIGMA/WEIGHT
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REMARK 3 GROUP 1 B-FACTOR (A**2) : NULL ; NULL
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REMARK 3 PARAMETER FILE 2 : PARAM.GNSOL
REMARK 3 PARAMETER FILE 3 : CIS_PEPTIDE.PARAM
REMARK 3 PARAMETER FILE 4 : IMP.PAR
REMARK 3 PARAMETER FILE 5 : ION.PARAM
REMARK 3 PARAMETER FILE 6 : NULL
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REMARK 3 TOPOLOGY FILE 3 : MPA.TOP
REMARK 3 TOPOLOGY FILE 4 : ION.TOP
REMARK 3 TOPOLOGY FILE 5 : TOPH.GNSOL
REMARK 3 TOPOLOGY FILE 6 : NULL
REMARK 3
REMARK 3 OTHER REFINEMENT REMARKS: NULL
REMARK 4
REMARK 4 1ME9 COMPLIES WITH FORMAT V. 2.3, 09-JULY-1998
REMARK 100
REMARK 100 THIS ENTRY HAS BEEN PROCESSED BY RCSB ON 09-AUG-2002.
REMARK 100 THE RCSB ID CODE IS RCSB016851.
REMARK 200
REMARK 200 EXPERIMENTAL DETAILS
REMARK 200 EXPERIMENT TYPE : X-RAY DIFFRACTION
REMARK 200 DATE OF DATA COLLECTION : 11-APR-2001
REMARK 200 TEMPERATURE (KELVIN) : 100.0
REMARK 200 PH : 7.50
REMARK 200 NUMBER OF CRYSTALS USED : 1
REMARK 200
REMARK 200 SYNCHROTRON (Y/N) : Y
REMARK 200 RADIATION SOURCE : SSRL
REMARK 200 BEAMLINE : 9-1
REMARK 200 X-RAY GENERATOR MODEL : NULL
REMARK 200 MONOCHROMATIC OR LAUE (M/L) : M
REMARK 200 WAVELENGTH OR RANGE (A) : 0.97
REMARK 200 MONOCHROMATOR : NULL
REMARK 200 OPTICS : NULL
REMARK 200
REMARK 200 DETECTOR TYPE : IMAGE PLATE
REMARK 200 DETECTOR MANUFACTURER : MARRESEARCH
REMARK 200 INTENSITY-INTEGRATION SOFTWARE : DENZO
REMARK 200 DATA SCALING SOFTWARE : SCALEPACK
REMARK 200
REMARK 200 NUMBER OF UNIQUE REFLECTIONS : 32513
REMARK 200 RESOLUTION RANGE HIGH (A) : 2.200
REMARK 200 RESOLUTION RANGE LOW (A) : 20.000
REMARK 200 REJECTION CRITERIA (SIGMA(I)) : 0.000
REMARK 200
REMARK 200 OVERALL.
REMARK 200 COMPLETENESS FOR RANGE (%) : 99.9
REMARK 200 DATA REDUNDANCY : 6.700
REMARK 200 R MERGE (I) : 0.06400
REMARK 200 R SYM (I) : NULL
REMARK 200 <I/SIGMA(I)> FOR THE DATA SET : 21.7000

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REMARK 200  
 REMARK 200 IN THE HIGHEST RESOLUTION SHELL.  
 REMARK 200 HIGHEST RESOLUTION SHELL, RANGE HIGH (A) : 2.20  
 REMARK 200 HIGHEST RESOLUTION SHELL, RANGE LOW (A) : 2.24  
 REMARK 200 COMPLETENESS FOR SHELL (%) : 99.8  
 REMARK 200 DATA REDUNDANCY IN SHELL : NULL  
 REMARK 200 R MERGE FOR SHELL (I) : 0.59600  
 REMARK 200 R SYM FOR SHELL (I) : NULL  
 REMARK 200 <I/SIGMA(I)> FOR SHELL : 2.130  
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 REMARK 200 DIFFRACTION PROTOCOL: SINGLE WAVELENGTH  
 REMARK 200 METHOD USED TO DETERMINE THE STRUCTURE: FOURIER SYNTHESIS  
 REMARK 200 SOFTWARE USED: CNS  
 REMARK 200 STARTING MODEL: PDB ENTRY 1AK5  
 REMARK 200  
 REMARK 200 REMARK: NULL  
 REMARK 280  
 REMARK 280 CRYSTAL  
 REMARK 280 SOLVENT CONTENT, VS (%): NULL  
 REMARK 280 MATTHEWS COEFFICIENT, VM (ANGSTROMS\*\*3/DA): NULL  
 REMARK 280  
 REMARK 280 CRYSTALLIZATION CONDITIONS: SODIUM MALONATE, TRIS, 2-  
 REMARK 280 MERCAPTOETHANOL, EDTA, GLYCEROL  
 REMARK 290  
 REMARK 290 CRYSTALLOGRAPHIC SYMMETRY  
 REMARK 290 SYMMETRY OPERATORS FOR SPACE GROUP: P 4 3 2  
 REMARK 290  

SYNOP	SYMMETRY
NNNMMM	OPERATOR
1555	X,Y,Z
2555	-X,-Y,Z
3555	-X,Y,-Z
4555	X,-Y,-Z
5555	Z,X,Y
6555	Z,-X,-Y
7555	-Z,-X,Y
8555	-Z,X,-Y
9555	Y,Z,X
10555	-Y,Z,-X
11555	Y,-Z,-X
12555	-Y,-Z,X
13555	Y,X,-Z
14555	-Y,-X,-Z
15555	Y,-X,Z
16555	-Y,X,Z
17555	X,Z,-Y
18555	-X,Z,Y
19555	-X,-Z,-Y
20555	X,-Z,Y
21555	Z,Y,-X
22555	Z,-Y,X
23555	-Z,Y,X
24555	-Z,-Y,-X

 REMARK 290  
 REMARK 290 WHERE NNN -> OPERATOR NUMBER  
 REMARK 290 MMM -> TRANSLATION VECTOR  
 REMARK 290

REMARK 290 CRYSTALLOGRAPHIC SYMMETRY TRANSFORMATIONS

REMARK 290 THE FOLLOWING TRANSFORMATIONS OPERATE ON THE ATOM/HETATM

REMARK 290 RECORDS IN THIS ENTRY TO PRODUCE CRYSTALLOGRAPHICALLY

REMARK 290 RELATED MOLECULES.

REMARK 290	SMTRY1	1	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	1	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY3	1	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	2	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	2	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY3	2	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	3	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	3	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY3	3	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	4	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	4	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY3	4	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	5	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY2	5	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	5	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY1	6	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY2	6	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	6	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	7	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY2	7	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	7	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY1	8	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY2	8	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	8	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	9	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	9	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	9	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	10	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	10	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	10	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	11	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	11	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY3	11	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	12	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	12	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY3	12	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	13	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	13	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	13	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	14	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	14	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	14	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	15	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	15	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	15	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	16	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	16	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	16	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	17	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	17	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	17	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	18	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	18	0.000000	0.000000	1.000000	0.000000



REMARK 290	SMTRY3	18	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY1	19	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	19	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY3	19	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	20	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	20	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY3	20	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY1	21	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY2	21	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY3	21	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	22	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY2	22	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY3	22	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	23	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY2	23	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY3	23	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	24	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY2	24	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY3	24	-1.000000	0.000000	0.000000	0.000000
REMARK 290						
REMARK 290	REMARK: NULL					
REMARK 300						
REMARK 300	BIOMOLECULE: 1					
REMARK 300	THIS ENTRY CONTAINS THE CRYSTALLOGRAPHIC ASYMMETRIC UNIT					
REMARK 300	WHICH CONSISTS OF 1 CHAIN(S). SEE REMARK 350 FOR					
REMARK 300	INFORMATION ON GENERATING THE BIOLOGICAL MOLECULE(S).					
REMARK 350						
REMARK 350	GENERATING THE BIOMOLECULE					
REMARK 350	COORDINATES FOR A COMPLETE MULTIMER REPRESENTING THE KNOWN					
REMARK 350	BIOLOGICALLY SIGNIFICANT OLIGOMERIZATION STATE OF THE					
REMARK 350	MOLECULE CAN BE GENERATED BY APPLYING BIOMT TRANSFORMATIONS					
REMARK 350	GIVEN BELOW. BOTH NON-CRYSTALLOGRAPHIC AND					
REMARK 350	CRYSTALLOGRAPHIC OPERATIONS ARE GIVEN.					
REMARK 350						
REMARK 350	BIOMOLECULE: 1					
REMARK 350	APPLY THE FOLLOWING TO CHAINS: A					
REMARK 350	BIOMT1	1	1.000000	0.000000	0.000000	0.000000
REMARK 350	BIOMT2	1	0.000000	1.000000	0.000000	0.000000
REMARK 350	BIOMT3	1	0.000000	0.000000	1.000000	0.000000
REMARK 350	BIOMT1	2	-1.000000	0.000000	0.000000	154.41200
REMARK 350	BIOMT2	2	0.000000	-1.000000	0.000000	154.41200
REMARK 350	BIOMT3	2	0.000000	0.000000	1.000000	0.000000
REMARK 350	BIOMT1	3	0.000000	1.000000	0.000000	0.000000
REMARK 350	BIOMT2	3	-1.000000	0.000000	0.000000	154.41200
REMARK 350	BIOMT3	3	0.000000	0.000000	1.000000	0.000000
REMARK 350	BIOMT1	4	0.000000	-1.000000	0.000000	154.41200
REMARK 350	BIOMT2	4	1.000000	0.000000	0.000000	0.000000
REMARK 350	BIOMT3	4	0.000000	0.000000	1.000000	0.000000
REMARK 465						
REMARK 465	MISSING RESIDUES					
REMARK 465	THE FOLLOWING RESIDUES WERE NOT LOCATED IN THE					
REMARK 465	EXPERIMENT. (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN					
REMARK 465	IDENTIFIER; SSSEQ=SEQUENCE NUMBER; I=INSERTION CODE.)					
REMARK 465						
REMARK 465	M	RES	C	SSSEQI		
REMARK 465		MET	A	1		
REMARK 465		GLY	A	102		

REMARK 465	PHE A	103
REMARK 465	VAL A	104
REMARK 465	VAL A	105
REMARK 465	SER A	106
REMARK 465	ASP A	107
REMARK 465	SER A	108
REMARK 465	ASN A	109
REMARK 465	VAL A	110
REMARK 465	LYS A	111
REMARK 465	PRO A	112
REMARK 465	ASP A	113
REMARK 465	GLN A	114
REMARK 465	THR A	115
REMARK 465	PHE A	116
REMARK 465	ALA A	117
REMARK 465	ASP A	118
REMARK 465	VAL A	119
REMARK 465	LEU A	120
REMARK 465	ALA A	121
REMARK 465	ILE A	122
REMARK 465	SER A	123
REMARK 465	GLN A	124
REMARK 465	ARG A	125
REMARK 465	THR A	126
REMARK 465	THR A	127
REMARK 465	HIS A	128
REMARK 465	ASN A	129
REMARK 465	THR A	130
REMARK 465	VAL A	131
REMARK 465	ALA A	132
REMARK 465	VAL A	133
REMARK 465	THR A	134
REMARK 465	ASP A	135
REMARK 465	ASP A	136
REMARK 465	GLY A	137
REMARK 465	THR A	138
REMARK 465	PRO A	139
REMARK 465	HIS A	140
REMARK 465	GLY A	141
REMARK 465	VAL A	142
REMARK 465	LEU A	143
REMARK 465	LEU A	144
REMARK 465	GLY A	145
REMARK 465	LEU A	146
REMARK 465	VAL A	147
REMARK 465	THR A	148
REMARK 465	GLN A	149
REMARK 465	ARG A	150
REMARK 465	ASP A	151
REMARK 465	TYR A	152
REMARK 465	PRO A	153
REMARK 465	ILE A	154
REMARK 465	ASP A	155
REMARK 465	LEU A	156
REMARK 465	THR A	157
REMARK 465	GLN A	158
REMARK 465	THR A	159

REMARK 465	GLU A	160
REMARK 465	THR A	161
REMARK 465	LYS A	162
REMARK 465	VAL A	163
REMARK 465	SER A	164
REMARK 465	ASP A	165
REMARK 465	MET A	166
REMARK 465	MET A	167
REMARK 465	THR A	168
REMARK 465	PRO A	169
REMARK 465	PHE A	170
REMARK 465	SER A	171
REMARK 465	LYS A	172
REMARK 465	LEU A	173
REMARK 465	VAL A	174
REMARK 465	THR A	175
REMARK 465	ALA A	176
REMARK 465	HIS A	177
REMARK 465	GLN A	178
REMARK 465	ASP A	179
REMARK 465	THR A	180
REMARK 465	LYS A	181
REMARK 465	LEU A	182
REMARK 465	SER A	183
REMARK 465	GLU A	184
REMARK 465	ALA A	185
REMARK 465	ASN A	186
REMARK 465	LYS A	187
REMARK 465	ILE A	188
REMARK 465	ILE A	189
REMARK 465	TRP A	190
REMARK 465	GLU A	191
REMARK 465	LYS A	192
REMARK 465	LYS A	193
REMARK 465	LEU A	194
REMARK 465	ASN A	195
REMARK 465	ALA A	196
REMARK 465	LEU A	197
REMARK 465	PRO A	198
REMARK 465	ILE A	199
REMARK 465	ILE A	200
REMARK 465	ASP A	201
REMARK 465	ASP A	202
REMARK 465	ASP A	203
REMARK 465	GLN A	204
REMARK 465	HIS A	205
REMARK 465	LEU A	206
REMARK 465	ARG A	207
REMARK 465	TYR A	208
REMARK 465	ILE A	209
REMARK 465	VAL A	210
REMARK 465	PHE A	211
REMARK 465	ARG A	212
REMARK 465	LYS A	213
REMARK 465	ASP A	214
REMARK 465	TYR A	215
REMARK 465	ASP A	216

REMARK 465 ARG A 217  
 REMARK 465 SER A 218  
 REMARK 465 GLN A 219  
 REMARK 465 VAL A 220  
 REMARK 465 CYS A 221  
 REMARK 465 GLN A 417  
 REMARK 465 ARG A 418  
 REMARK 465 TYR A 419  
 REMARK 465 ASP A 420  
 REMARK 465 LEU A 421  
 REMARK 465 GLY A 422  
 REMARK 465 GLY A 423  
 REMARK 465 LYS A 424  
 REMARK 465 GLN A 425  
 REMARK 465 LYS A 426  
 REMARK 465 LEU A 427  
 REMARK 465 SER A 428  
 REMARK 465 VAL A 484  
 REMARK 465 GLU A 485  
 REMARK 465 GLY A 486  
 REMARK 465 GLY A 487  
 REMARK 465 ALA A 488  
 REMARK 465 HIS A 489  
 REMARK 465 ASP A 490  
 REMARK 465 VAL A 491  
 REMARK 465 ILE A 492  
 REMARK 465 VAL A 493  
 REMARK 465 LYS A 494  
 REMARK 465 ASP A 495  
 REMARK 465 ARG A 496  
 REMARK 465 ILE A 497  
 REMARK 465 ASN A 498  
 REMARK 465 ASP A 499  
 REMARK 465 TYR A 500  
 REMARK 465 HIS A 501  
 REMARK 465 PRO A 502  
 REMARK 465 LYS A 503

REMARK 500

REMARK 500 GEOMETRY AND STEREOCHEMISTRY

REMARK 500 SUBTOPIC: CLOSE CONTACTS

REMARK 500

REMARK 500 THE FOLLOWING ATOMS THAT ARE RELATED BY CRYSTALLOGRAPHIC  
 REMARK 500 SYMMETRY ARE IN CLOSE CONTACT. AN ATOM LOCATED WITHIN 0.15  
 REMARK 500 ANGSTROMS OF A SYMMETRY RELATED ATOM IS ASSUMED TO BE ON A  
 REMARK 500 SPECIAL POSITION AND IS, THEREFORE, LISTED IN REMARK 375  
 REMARK 500 INSTEAD OF REMARK 500. ATOMS WITH NON-BLANK ALTERNATE  
 REMARK 500 LOCATION INDICATORS ARE NOT INCLUDED IN THE CALCULATIONS.

REMARK 500

REMARK 500 DISTANCE CUTOFF:

REMARK 500 2.2 ANGSTROMS FOR CONTACTS NOT INVOLVING HYDROGEN ATOMS

REMARK 500 1.6 ANGSTROMS FOR CONTACTS INVOLVING HYDROGEN ATOMS

REMARK 500

ATM1	RES	C	SSEQI	ATM2	RES	C	SSEQI	SSYMOP	DISTANCE
O	GLY	A	20	K	K	A	900	16655	2.18

REMARK 500

REMARK 500 GEOMETRY AND STEREOCHEMISTRY

REMARK 500 SUBTOPIC: COVALENT BOND ANGLES

REMARK 500

REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES  
 REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE  
 REMARK 500 THAN 6\*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN  
 REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).

REMARK 500

REMARK 500 STANDARD TABLE:

REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,3(1X,A4,2X),12X,F5.1)

REMARK 500

REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991

REMARK 500

REMARK 500 M RES CSSEQI ATM1 ATM2 ATM3

REMARK 500 ILE A 27 N - CA - C ANGL. DEV. = -8.1 DEGREES

REMARK 500 SER A 63 N - CA - C ANGL. DEV. = 7.9 DEGREES

REMARK 500 GLY A 305 N - CA - C ANGL. DEV. = 7.8 DEGREES

REMARK 500 GLY A 312 N - CA - C ANGL. DEV. = 7.2 DEGREES

REMARK 500 SER A 357 N - CA - C ANGL. DEV. = -7.4 DEGREES

REMARK 500 LYS A 472 N - CA - C ANGL. DEV. = 8.0 DEGREES

REMARK 500 LYS A 474 N - CA - C ANGL. DEV. = -9.2 DEGREES

REMARK 500 LEU A 477 N - CA - C ANGL. DEV. = -7.8 DEGREES

REMARK 900

REMARK 900 RELATED ENTRIES

REMARK 900 RELATED ID: 1AK5 RELATED DB: PDB

REMARK 900 INOSINE MONOPHOSPHATE DEHYDROGENASE (IMPDH) FROM

REMARK 900 TRITRICHOMONAS FOETUS

REMARK 900 RELATED ID: 1ME7 RELATED DB: PDB

REMARK 900 1ME7 CONTAINS THE SAME PROTEIN WITH RMP AND MPA BOUND

REMARK 900 RELATED ID: 1ME8 RELATED DB: PDB

REMARK 900 1ME8 CONTAINS THE SAME PROTEIN WITH RMP BOUND

REMARK 900 RELATED ID: 1MEH RELATED DB: PDB

REMARK 900 1MEH CONTAINS THE SAME PROTEIN WITH IMP AND MPA BOUND

REMARK 900 RELATED ID: 1MEI RELATED DB: PDB

REMARK 900 1MEI CONTAINS THE SAME PROTEIN WITH XMP AND MYCOPHENOLIC

REMARK 900 ACID BOUND

REMARK 900 RELATED ID: 1MEW RELATED DB: PDB

REMARK 900 1MEW CONTAINS THE SAME PROTEIN WITH XMP AND NAD BOUND

DBREF 1ME9 A 1 503 SWS P50097 IMDH\_TRIFO 1 503

SEQADV 1ME9 CSO A 319 SWS P50097 CYS 319 MODIFIED RESIDUE

SEQRES 1 A 503 MET ALA LYS TYR TYR ASN GLU PRO CYS HIS THR PHE ASN

SEQRES 2 A 503 GLU TYR LEU LEU ILE PRO GLY LEU SER THR VAL ASP CYS

SEQRES 3 A 503 ILE PRO SER ASN VAL ASN LEU SER THR PRO LEU VAL LYS

SEQRES 4 A 503 PHE GLN LYS GLY GLN GLN SER GLU ILE ASN LEU LYS ILE

SEQRES 5 A 503 PRO LEU VAL SER ALA ILE MET GLN SER VAL SER GLY GLU

SEQRES 6 A 503 LYS MET ALA ILE ALA LEU ALA ARG GLU GLY GLY ILE SER

SEQRES 7 A 503 PHE ILE PHE GLY SER GLN SER ILE GLU SER GLN ALA ALA

SEQRES 8 A 503 MET VAL HIS ALA VAL LYS ASN PHE LYS ALA GLY PHE VAL

SEQRES 9 A 503 VAL SER ASP SER ASN VAL LYS PRO ASP GLN THR PHE ALA

SEQRES 10 A 503 ASP VAL LEU ALA ILE SER GLN ARG THR THR HIS ASN THR

SEQRES 11 A 503 VAL ALA VAL THR ASP ASP GLY THR PRO HIS GLY VAL LEU

SEQRES 12 A 503 LEU GLY LEU VAL THR GLN ARG ASP TYR PRO ILE ASP LEU

SEQRES 13 A 503 THR GLN THR GLU THR LYS VAL SER ASP MET MET THR PRO

SEQRES 14 A 503 PHE SER LYS LEU VAL THR ALA HIS GLN ASP THR LYS LEU

SEQRES 15 A 503 SER GLU ALA ASN LYS ILE ILE TRP GLU LYS LYS LEU ASN

SEQRES 16 A 503 ALA LEU PRO ILE ILE ASP ASP ASP GLN HIS LEU ARG TYR

SEQRES 17 A 503 ILE VAL PHE ARG LYS ASP TYR ASP ARG SER GLN VAL CYS

SEQRES 18 A 503 HIS ASN GLU LEU VAL ASP SER GLN LYS ARG TYR LEU VAL

SEQRES 19 A 503 GLY ALA GLY ILE ASN THR ARG ASP PHE ARG GLU ARG VAL

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SEQRES 20 A 503 PRO ALA LEU VAL GLU ALA GLY ALA ASP VAL LEU CYS ILE
SEQRES 21 A 503 ASP SER SER ASP GLY PHE SER GLU TRP GLN LYS ILE THR
SEQRES 22 A 503 ILE GLY TRP ILE ARG GLU LYS TYR GLY ASP LYS VAL LYS
SEQRES 23 A 503 VAL GLY ALA GLY ASN ILE VAL ASP GLY GLU GLY PHE ARG
SEQRES 24 A 503 TYR LEU ALA ASP ALA GLY ALA ASP PHE ILE LYS ILE GLY
SEQRES 25 A 503 ILE GLY GLY GLY SER ILE CSO ILE THR ARG GLU GLN LYS
SEQRES 26 A 503 GLY ILE GLY ARG GLY GLN ALA THR ALA VAL ILE ASP VAL
SEQRES 27 A 503 VAL ALA GLU ARG ASN LYS TYR PHE GLU GLU THR GLY ILE
SEQRES 28 A 503 TYR ILE PRO VAL CYS SER ASP GLY GLY ILE VAL TYR ASP
SEQRES 29 A 503 TYR HIS MET THR LEU ALA LEU ALA MET GLY ALA ASP PHE
SEQRES 30 A 503 ILE MET LEU GLY ARG TYR PHE ALA ARG PHE GLU GLU SER
SEQRES 31 A 503 PRO THR ARG LYS VAL THR ILE ASN GLY SER VAL MET LYS
SEQRES 32 A 503 GLU TYR TRP GLY GLU GLY SER SER ARG ALA ARG ASN TRP
SEQRES 33 A 503 GLN ARG TYR ASP LEU GLY GLY LYS GLN LYS LEU SER PHE
SEQRES 34 A 503 GLU GLU GLY VAL ASP SER TYR VAL PRO TYR ALA GLY LYS
SEQRES 35 A 503 LEU LYS ASP ASN VAL GLU ALA SER LEU ASN LYS VAL LYS
SEQRES 36 A 503 SER THR MET CYS ASN CYS GLY ALA LEU THR ILE PRO GLN
SEQRES 37 A 503 LEU GLN SER LYS ALA LYS ILE THR LEU VAL SER SER VAL
SEQRES 38 A 503 SER ILE VAL GLU GLY GLY ALA HIS ASP VAL ILE VAL LYS
SEQRES 39 A 503 ASP ARG ILE ASN ASP TYR HIS PRO LYS
MODRES 1ME9 CSO A 319 CYS S-HYDROXYCYSTEINE
HET CSO A 319 7
HET K A 900 1
HET IMP 602 23
HETNAM CSO S-HYDROXYCYSTEINE
HETNAM K POTASSIUM ION
HETNAM IMP INOSINIC ACID
FORMUL 1 CSO C3 H7 N1 O3 S1
FORMUL 2 K K1 1+
FORMUL 3 IMP C10 H13 N4 O8 P1
FORMUL 4 HOH *145(H2 O1)
HELIX 1 1 THR A 11 ASN A 13 5 3
HELIX 2 2 ILE A 27 VAL A 31 5 5
HELIX 3 3 GLY A 64 GLU A 74 1 11
HELIX 4 4 SER A 85 ASN A 98 1 14
HELIX 5 5 ASP A 242 GLY A 254 1 13
HELIX 6 6 SER A 267 GLY A 282 1 16
HELIX 7 7 ASP A 283 VAL A 285 5 3
HELIX 8 8 ASP A 294 ALA A 304 1 11
HELIX 9 9 GLY A 330 GLY A 350 1 21
HELIX 10 10 TYR A 363 MET A 373 1 11
HELIX 11 11 GLY A 381 ARG A 386 1 6
HELIX 12 12 SER A 410 ASN A 415 1 6
HELIX 13 13 LYS A 442 CYS A 461 1 20
HELIX 14 14 THR A 465 ALA A 473 1 9
SHEET 1 A 2 TYR A 15 LEU A 17 0
SHEET 2 A 2 ILE A 475 LEU A 477 -1 O THR A 476 N LEU A 16
SHEET 1 B 2 THR A 35 PRO A 36 0
SHEET 2 B 2 ASN A 49 LEU A 50 -1 O LEU A 50 N THR A 35
SHEET 1 C 2 PHE A 40 GLN A 41 0
SHEET 2 C 2 ILE A 351 TYR A 352 -1 O TYR A 352 N PHE A 40
SHEET 1 D 9 LEU A 54 SER A 56 0
SHEET 2 D 9 ILE A 77 ILE A 80 1 O ILE A 77 N SER A 56
SHEET 3 D 9 GLY A 235 ILE A 238 1 O GLY A 237 N ILE A 80
SHEET 4 D 9 VAL A 257 ILE A 260 1 O CYS A 259 N ILE A 238
SHEET 5 D 9 VAL A 287 ILE A 292 1 O GLY A 288 N LEU A 258
SHEET 6 D 9 PHE A 308 ILE A 311 1 O LYS A 310 N ALA A 289

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TABLE 2

SHEET	7	D 9 VAL A 355	ASP A 358	1	O	CYS A 356	N	ILE A 311	
SHEET	8	D 9 PHE A 377	LEU A 380	1	O	MET A 379	N	SER A 357	
SHEET	9	D 9 LEU A 54	SER A 56	1	N	VAL A 55	O	ILE A 378	
SHEET	1	E 3 LYS A 394	ILE A 397	0					
SHEET	2	E 3 SER A 400	TRP A 406	-1	O	SER A 400	N	ILE A 397	
SHEET	3	E 3 ASP A 434	PRO A 438	-1	O	SER A 435	N	TYR A 405	
SSBOND	1	CYS A 26	CYS A 459						
CISPEP	1	GLY A 290	ASN A 291		0		0.99		
CRYST1	154.412	154.412	154.412	90.00	90.00	90.00	P 4 3 2	24	
ORIGX1		1.000000	0.000000	0.000000		0.000000			
ORIGX2		0.000000	1.000000	0.000000		0.000000			
ORIGX3		0.000000	0.000000	1.000000		0.000000			
SCALE1		0.006476	0.000000	0.000000		0.000000			
SCALE2		0.000000	0.006476	0.000000		0.000000			
SCALE3		0.000000	0.000000	0.006476		0.000000			
ATOM	1	N ALA A 2	55.031	74.792	36.719	1.00	34.77		N
ATOM	2	CA ALA A 2	55.778	73.707	36.025	1.00	35.14		C
ATOM	3	C ALA A 2	57.099	73.393	36.732	1.00	35.76		C
ATOM	4	O ALA A 2	57.541	74.137	37.609	1.00	33.95		O
ATOM	5	CB ALA A 2	56.041	74.107	34.583	1.00	34.68		C
ATOM	6	N LYS A 3	57.724	72.288	36.340	1.00	35.35		N
ATOM	7	CA LYS A 3	58.992	71.873	36.927	1.00	37.15		C
ATOM	8	C LYS A 3	60.102	72.070	35.899	1.00	36.78		C
ATOM	9	O LYS A 3	59.954	71.708	34.735	1.00	38.00		O
ATOM	10	CB LYS A 3	58.899	70.403	37.363	1.00	39.80		C
ATOM	11	CG LYS A 3	60.157	69.806	37.997	1.00	44.47		C
ATOM	12	CD LYS A 3	61.036	69.120	36.954	1.00	48.61		C
ATOM	13	CE LYS A 3	61.897	68.023	37.579	1.00	49.58		C
ATOM	14	NZ LYS A 3	62.832	68.555	38.611	1.00	52.93		N
ATOM	15	N TYR A 4	61.206	72.662	36.339	1.00	36.47		N
ATOM	16	CA TYR A 4	62.351	72.934	35.479	1.00	36.96		C
ATOM	17	C TYR A 4	63.577	72.172	35.977	1.00	38.55		C
ATOM	18	O TYR A 4	63.591	71.670	37.096	1.00	37.91		O
ATOM	19	CB TYR A 4	62.635	74.442	35.472	1.00	35.25		C
ATOM	20	CG TYR A 4	61.519	75.245	34.848	1.00	34.15		C
ATOM	21	CD1 TYR A 4	61.394	75.337	33.464	1.00	32.56		C
ATOM	22	CD2 TYR A 4	60.554	75.866	35.637	1.00	34.18		C
ATOM	23	CE1 TYR A 4	60.330	76.029	32.879	1.00	33.21		C
ATOM	24	CE2 TYR A 4	59.484	76.561	35.061	1.00	33.54		C
ATOM	25	CZ TYR A 4	59.380	76.637	33.684	1.00	32.10		C
ATOM	26	OH TYR A 4	58.328	77.310	33.111	1.00	30.26		O
ATOM	27	N TYR A 5	64.608	72.091	35.144	1.00	40.78		N
ATOM	28	CA TYR A 5	65.823	71.383	35.520	1.00	42.88		C
ATOM	29	C TYR A 5	67.023	72.320	35.609	1.00	44.40		C
ATOM	30	O TYR A 5	67.062	73.368	34.957	1.00	44.26		O
ATOM	31	CB TYR A 5	66.104	70.251	34.527	1.00	42.67		C
ATOM	32	CG TYR A 5	64.970	69.255	34.423	1.00	42.51		C
ATOM	33	CD1 TYR A 5	63.796	69.579	33.745	1.00	43.00		C
ATOM	34	CD2 TYR A 5	65.058	67.997	35.030	1.00	43.01		C
ATOM	35	CE1 TYR A 5	62.735	68.682	33.670	1.00	43.13		C
ATOM	36	CE2 TYR A 5	64.005	67.090	34.963	1.00	42.79		C
ATOM	37	CZ TYR A 5	62.845	67.440	34.281	1.00	43.79		C
ATOM	38	OH TYR A 5	61.794	66.556	34.202	1.00	42.47		O
ATOM	39	N ASN A 6	67.996	71.934	36.429	1.00	45.72		N
ATOM	40	CA ASN A 6	69.201	72.729	36.636	1.00	45.99		C
ATOM	41	C ASN A 6	70.163	72.704	35.453	1.00	45.21		C
ATOM	42	O ASN A 6	70.883	73.673	35.218	1.00	46.34		O

TABLE 2

ATOM	43	CB	ASN	A	6	69.926	72.243	37.893	1.00	48.66	C
ATOM	44	CG	ASN	A	6	69.147	72.530	39.163	1.00	51.75	C
ATOM	45	OD1	ASN	A	6	69.264	71.805	40.153	1.00	52.73	O
ATOM	46	ND2	ASN	A	6	68.356	73.601	39.147	1.00	53.06	N
ATOM	47	N	GLU	A	7	70.177	71.605	34.707	1.00	43.47	N
ATOM	48	CA	GLU	A	7	71.079	71.486	33.564	1.00	41.57	C
ATOM	49	C	GLU	A	7	70.346	71.136	32.284	1.00	38.29	C
ATOM	50	O	GLU	A	7	69.314	70.472	32.315	1.00	37.72	O
ATOM	51	CB	GLU	A	7	72.127	70.393	33.817	1.00	43.70	C
ATOM	52	CG	GLU	A	7	73.090	70.645	34.973	1.00	46.76	C
ATOM	53	CD	GLU	A	7	73.898	71.919	34.802	1.00	47.87	C
ATOM	54	OE1	GLU	A	7	74.359	72.193	33.670	1.00	49.12	O
ATOM	55	OE2	GLU	A	7	74.082	72.641	35.805	1.00	50.03	O
ATOM	56	N	PRO	A	8	70.871	71.577	31.135	1.00	35.40	N
ATOM	57	CA	PRO	A	8	70.208	71.252	29.871	1.00	34.46	C
ATOM	58	C	PRO	A	8	70.554	69.795	29.540	1.00	33.72	C
ATOM	59	O	PRO	A	8	71.523	69.267	30.073	1.00	33.53	O
ATOM	60	CB	PRO	A	8	70.835	72.240	28.895	1.00	34.81	C
ATOM	61	CG	PRO	A	8	72.234	72.402	29.433	1.00	33.93	C
ATOM	62	CD	PRO	A	8	72.018	72.481	30.923	1.00	35.69	C
ATOM	63	N	CYS	A	9	69.769	69.139	28.690	1.00	32.35	N
ATOM	64	CA	CYS	A	9	70.080	67.760	28.330	1.00	32.79	C
ATOM	65	C	CYS	A	9	71.159	67.727	27.240	1.00	30.89	C
ATOM	66	O	CYS	A	9	71.332	68.694	26.501	1.00	30.36	O
ATOM	67	CB	CYS	A	9	68.814	67.012	27.884	1.00	35.10	C
ATOM	68	SG	CYS	A	9	67.853	67.729	26.524	1.00	42.35	S
ATOM	69	N	HIS	A	10	71.888	66.618	27.157	1.00	30.90	N
ATOM	70	CA	HIS	A	10	72.979	66.462	26.193	1.00	29.93	C
ATOM	71	C	HIS	A	10	72.848	65.184	25.371	1.00	30.71	C
ATOM	72	O	HIS	A	10	72.257	64.207	25.825	1.00	30.16	O
ATOM	73	CB	HIS	A	10	74.315	66.419	26.933	1.00	29.59	C
ATOM	74	CG	HIS	A	10	74.582	67.624	27.773	1.00	30.61	C
ATOM	75	ND1	HIS	A	10	74.945	68.840	27.236	1.00	30.69	N
ATOM	76	CD2	HIS	A	10	74.533	67.804	29.115	1.00	30.16	C
ATOM	77	CE1	HIS	A	10	75.109	69.716	28.210	1.00	30.34	C
ATOM	78	NE2	HIS	A	10	74.864	69.112	29.359	1.00	31.65	N
ATOM	79	N	THR	A	11	73.405	65.199	24.164	1.00	30.01	N
ATOM	80	CA	THR	A	11	73.368	64.032	23.286	1.00	30.68	C
ATOM	81	C	THR	A	11	74.696	63.287	23.412	1.00	29.38	C
ATOM	82	O	THR	A	11	75.639	63.803	24.006	1.00	29.12	O
ATOM	83	CB	THR	A	11	73.194	64.437	21.816	1.00	31.25	C
ATOM	84	OG1	THR	A	11	74.303	65.251	21.419	1.00	33.58	O
ATOM	85	CG2	THR	A	11	71.903	65.220	21.621	1.00	34.80	C
ATOM	86	N	PHE	A	12	74.768	62.085	22.846	1.00	29.78	N
ATOM	87	CA	PHE	A	12	75.991	61.278	22.894	1.00	31.09	C
ATOM	88	C	PHE	A	12	77.208	61.973	22.287	1.00	31.77	C
ATOM	89	O	PHE	A	12	78.334	61.771	22.747	1.00	30.24	O
ATOM	90	CB	PHE	A	12	75.789	59.943	22.173	1.00	28.84	C
ATOM	91	CG	PHE	A	12	74.853	59.003	22.877	1.00	29.84	C
ATOM	92	CD1	PHE	A	12	74.966	58.782	24.247	1.00	28.95	C
ATOM	93	CD2	PHE	A	12	73.904	58.284	22.156	1.00	29.11	C
ATOM	94	CE1	PHE	A	12	74.153	57.853	24.888	1.00	30.30	C
ATOM	95	CE2	PHE	A	12	73.082	57.348	22.788	1.00	30.62	C
ATOM	96	CZ	PHE	A	12	73.207	57.130	24.154	1.00	28.11	C
ATOM	97	N	ASN	A	13	76.984	62.770	21.243	1.00	33.09	N
ATOM	98	CA	ASN	A	13	78.071	63.496	20.582	1.00	33.64	C
ATOM	99	C	ASN	A	13	78.783	64.499	21.487	1.00	32.75	C



TABLE 2

ATOM	100	O	ASN	A	13	79.884	64.944	21.168	1.00	33.53	O
ATOM	101	CB	ASN	A	13	77.554	64.238	19.344	1.00	37.76	C
ATOM	102	CG	ASN	A	13	77.564	63.377	18.098	1.00	42.14	C
ATOM	103	OD1	ASN	A	13	78.553	62.701	17.804	1.00	46.22	O
ATOM	104	ND2	ASN	A	13	76.471	63.408	17.348	1.00	44.81	N
ATOM	105	N	GLU	A	14	78.163	64.861	22.607	1.00	31.62	N
ATOM	106	CA	GLU	A	14	78.771	65.818	23.531	1.00	31.09	C
ATOM	107	C	GLU	A	14	79.655	65.155	24.581	1.00	31.08	C
ATOM	108	O	GLU	A	14	80.097	65.801	25.527	1.00	31.33	O
ATOM	109	CB	GLU	A	14	77.684	66.629	24.232	1.00	31.42	C
ATOM	110	CG	GLU	A	14	76.804	67.400	23.272	1.00	32.57	C
ATOM	111	CD	GLU	A	14	75.692	68.138	23.971	1.00	31.00	C
ATOM	112	OE1	GLU	A	14	75.995	68.988	24.831	1.00	32.14	O
ATOM	113	OE2	GLU	A	14	74.516	67.864	23.660	1.00	32.39	O
ATOM	114	N	TYR	A	15	79.928	63.869	24.418	1.00	29.84	N
ATOM	115	CA	TYR	A	15	80.746	63.176	25.397	1.00	29.38	C
ATOM	116	C	TYR	A	15	81.916	62.432	24.792	1.00	29.40	C
ATOM	117	O	TYR	A	15	81.906	62.064	23.616	1.00	30.63	O
ATOM	118	CB	TYR	A	15	79.889	62.177	26.184	1.00	29.52	C
ATOM	119	CG	TYR	A	15	78.909	62.805	27.147	1.00	30.93	C
ATOM	120	CD1	TYR	A	15	79.296	63.131	28.446	1.00	30.83	C
ATOM	121	CD2	TYR	A	15	77.593	63.074	26.759	1.00	30.10	C
ATOM	122	CE1	TYR	A	15	78.400	63.706	29.341	1.00	32.23	C
ATOM	123	CE2	TYR	A	15	76.688	63.653	27.646	1.00	32.13	C
ATOM	124	CZ	TYR	A	15	77.099	63.967	28.934	1.00	32.37	C
ATOM	125	OH	TYR	A	15	76.225	64.565	29.809	1.00	35.93	O
ATOM	126	N	LEU	A	16	82.929	62.216	25.620	1.00	30.01	N
ATOM	127	CA	LEU	A	16	84.107	61.457	25.229	1.00	30.13	C
ATOM	128	C	LEU	A	16	84.514	60.664	26.463	1.00	28.66	C
ATOM	129	O	LEU	A	16	84.207	61.048	27.592	1.00	26.73	O
ATOM	130	CB	LEU	A	16	85.260	62.374	24.788	1.00	31.28	C
ATOM	131	CG	LEU	A	16	85.169	63.110	23.440	1.00	32.96	C
ATOM	132	CD1	LEU	A	16	86.432	63.925	23.241	1.00	34.63	C
ATOM	133	CD2	LEU	A	16	85.011	62.126	22.287	1.00	33.72	C
ATOM	134	N	LEU	A	17	85.182	59.543	26.239	1.00	29.11	N
ATOM	135	CA	LEU	A	17	85.652	58.696	27.327	1.00	30.34	C
ATOM	136	C	LEU	A	17	87.129	58.990	27.618	1.00	30.21	C
ATOM	137	O	LEU	A	17	87.943	59.094	26.698	1.00	31.80	O
ATOM	138	CB	LEU	A	17	85.502	57.224	26.935	1.00	29.21	C
ATOM	139	CG	LEU	A	17	84.082	56.655	26.892	1.00	28.59	C
ATOM	140	CD1	LEU	A	17	84.051	55.435	25.990	1.00	25.58	C
ATOM	141	CD2	LEU	A	17	83.622	56.315	28.304	1.00	25.80	C
ATOM	142	N	ILE	A	18	87.466	59.144	28.892	1.00	31.07	N
ATOM	143	CA	ILE	A	18	88.852	59.385	29.282	1.00	30.21	C
ATOM	144	C	ILE	A	18	89.418	58.024	29.677	1.00	29.84	C
ATOM	145	O	ILE	A	18	88.859	57.345	30.536	1.00	29.71	O
ATOM	146	CB	ILE	A	18	88.939	60.359	30.472	1.00	30.01	C
ATOM	147	CG1	ILE	A	18	88.464	61.748	30.035	1.00	30.69	C
ATOM	148	CG2	ILE	A	18	90.375	60.428	30.991	1.00	28.88	C
ATOM	149	CD1	ILE	A	18	88.447	62.774	31.145	1.00	31.89	C
ATOM	150	N	PRO	A	19	90.528	57.601	29.045	1.00	29.50	N
ATOM	151	CA	PRO	A	19	91.140	56.303	29.350	1.00	30.06	C
ATOM	152	C	PRO	A	19	91.482	56.059	30.818	1.00	29.17	C
ATOM	153	O	PRO	A	19	91.777	56.989	31.570	1.00	30.34	O
ATOM	154	CB	PRO	A	19	92.389	56.285	28.460	1.00	30.87	C
ATOM	155	CG	PRO	A	19	91.978	57.136	27.284	1.00	30.83	C
ATOM	156	CD	PRO	A	19	91.265	58.285	27.966	1.00	29.93	C

TABLE 2

ATOM	157	N	GLY	A	20	91.415	54.792	31.210	1.00	27.42	N
ATOM	158	CA	GLY	A	20	91.745	54.398	32.566	1.00	27.95	C
ATOM	159	C	GLY	A	20	92.936	53.469	32.445	1.00	27.30	C
ATOM	160	O	GLY	A	20	93.543	53.402	31.386	1.00	26.88	O
ATOM	161	N	LEU	A	21	93.275	52.739	33.497	1.00	29.16	N
ATOM	162	CA	LEU	A	21	94.422	51.838	33.424	1.00	29.56	C
ATOM	163	C	LEU	A	21	94.130	50.584	32.611	1.00	29.75	C
ATOM	164	O	LEU	A	21	93.212	49.831	32.920	1.00	29.91	O
ATOM	165	CB	LEU	A	21	94.885	51.435	34.834	1.00	30.32	C
ATOM	166	CG	LEU	A	21	96.026	50.403	34.888	1.00	30.63	C
ATOM	167	CD1	LEU	A	21	97.262	50.967	34.183	1.00	25.74	C
ATOM	168	CD2	LEU	A	21	96.342	50.047	36.348	1.00	31.08	C
ATOM	169	N	SER	A	22	94.917	50.370	31.564	1.00	31.55	N
ATOM	170	CA	SER	A	22	94.762	49.191	30.726	1.00	32.64	C
ATOM	171	C	SER	A	22	95.789	48.167	31.189	1.00	34.68	C
ATOM	172	O	SER	A	22	96.993	48.439	31.185	1.00	32.90	O
ATOM	173	CB	SER	A	22	95.008	49.531	29.256	1.00	32.66	C
ATOM	174	OG	SER	A	22	94.090	50.505	28.793	1.00	31.63	O
ATOM	175	N	THR	A	23	95.305	46.998	31.600	1.00	36.61	N
ATOM	176	CA	THR	A	23	96.170	45.923	32.075	1.00	37.91	C
ATOM	177	C	THR	A	23	96.550	44.997	30.927	1.00	38.68	C
ATOM	178	O	THR	A	23	95.882	44.978	29.892	1.00	39.48	O
ATOM	179	CB	THR	A	23	95.478	45.107	33.174	1.00	37.72	C
ATOM	180	OG1	THR	A	23	94.187	44.701	32.718	1.00	41.28	O
ATOM	181	CG2	THR	A	23	95.311	45.936	34.431	1.00	38.84	C
ATOM	182	N	VAL	A	24	97.624	44.232	31.117	1.00	39.25	N
ATOM	183	CA	VAL	A	24	98.118	43.311	30.095	1.00	39.40	C
ATOM	184	C	VAL	A	24	97.105	42.274	29.611	1.00	40.18	C
ATOM	185	O	VAL	A	24	97.178	41.820	28.470	1.00	39.57	O
ATOM	186	CB	VAL	A	24	99.390	42.559	30.582	1.00	40.21	C
ATOM	187	CG1	VAL	A	24	100.555	43.537	30.721	1.00	38.74	C
ATOM	188	CG2	VAL	A	24	99.115	41.863	31.912	1.00	40.04	C
ATOM	189	N	ASP	A	25	96.160	41.896	30.464	1.00	41.79	N
ATOM	190	CA	ASP	A	25	95.170	40.903	30.066	1.00	45.39	C
ATOM	191	C	ASP	A	25	94.021	41.455	29.225	1.00	45.56	C
ATOM	192	O	ASP	A	25	93.233	40.684	28.681	1.00	45.92	O
ATOM	193	CB	ASP	A	25	94.592	40.185	31.294	1.00	48.41	C
ATOM	194	CG	ASP	A	25	93.943	41.140	32.283	1.00	51.92	C
ATOM	195	OD1	ASP	A	25	93.010	40.724	33.005	1.00	54.02	O
ATOM	196	OD2	ASP	A	25	94.375	42.304	32.355	1.00	53.64	O
ATOM	197	N	CYS	A	26	93.912	42.774	29.096	1.00	45.84	N
ATOM	198	CA	CYS	A	26	92.808	43.308	28.309	1.00	45.30	C
ATOM	199	C	CYS	A	26	93.109	43.487	26.838	1.00	45.23	C
ATOM	200	O	CYS	A	26	93.730	44.463	26.426	1.00	44.99	O
ATOM	201	CB	CYS	A	26	92.301	44.641	28.867	1.00	44.12	C
ATOM	202	SG	CYS	A	26	90.582	45.050	28.364	1.00	43.07	S
ATOM	203	N	ILE	A	27	92.663	42.521	26.049	1.00	46.24	N
ATOM	204	CA	ILE	A	27	92.807	42.573	24.608	1.00	47.19	C
ATOM	205	C	ILE	A	27	91.403	42.280	24.110	1.00	47.45	C
ATOM	206	O	ILE	A	27	90.651	41.553	24.763	1.00	46.02	O
ATOM	207	CB	ILE	A	27	93.796	41.507	24.077	1.00	49.39	C
ATOM	208	CG1	ILE	A	27	93.511	40.151	24.728	1.00	49.86	C
ATOM	209	CG2	ILE	A	27	95.229	41.964	24.329	1.00	49.14	C
ATOM	210	CD1	ILE	A	27	94.444	39.039	24.270	1.00	52.58	C
ATOM	211	N	PRO	A	28	91.025	42.857	22.962	1.00	47.37	N
ATOM	212	CA	PRO	A	28	89.703	42.674	22.363	1.00	47.25	C
ATOM	213	C	PRO	A	28	89.120	41.265	22.436	1.00	47.37	C

TABLE 2

ATOM	214	O	PRO	A	28	87.972	41.088	22.842	1.00	46.21	O
ATOM	215	CB	PRO	A	28	89.919	43.146	20.929	1.00	48.82	C
ATOM	216	CG	PRO	A	28	90.865	44.289	21.121	1.00	47.38	C
ATOM	217	CD	PRO	A	28	91.866	43.722	22.111	1.00	48.12	C
ATOM	218	N	SER	A	29	89.908	40.264	22.057	1.00	47.34	N
ATOM	219	CA	SER	A	29	89.426	38.888	22.063	1.00	46.68	C
ATOM	220	C	SER	A	29	89.015	38.355	23.435	1.00	45.41	C
ATOM	221	O	SER	A	29	88.294	37.361	23.524	1.00	45.14	O
ATOM	222	CB	SER	A	29	90.469	37.952	21.429	1.00	48.70	C
ATOM	223	OG	SER	A	29	91.665	37.887	22.188	1.00	51.82	O
ATOM	224	N	ASN	A	30	89.460	38.999	24.507	1.00	43.78	N
ATOM	225	CA	ASN	A	30	89.079	38.528	25.832	1.00	42.85	C
ATOM	226	C	ASN	A	30	87.923	39.330	26.427	1.00	40.38	C
ATOM	227	O	ASN	A	30	87.454	39.033	27.528	1.00	40.36	O
ATOM	228	CB	ASN	A	30	90.271	38.560	26.789	1.00	45.40	C
ATOM	229	CG	ASN	A	30	91.397	37.656	26.341	1.00	48.87	C
ATOM	230	OD1	ASN	A	30	91.165	36.604	25.739	1.00	50.85	O
ATOM	231	ND2	ASN	A	30	92.629	38.052	26.644	1.00	50.41	N
ATOM	232	N	VAL	A	31	87.461	40.342	25.703	1.00	35.43	N
ATOM	233	CA	VAL	A	31	86.355	41.153	26.196	1.00	34.43	C
ATOM	234	C	VAL	A	31	85.030	40.405	26.046	1.00	32.47	C
ATOM	235	O	VAL	A	31	84.719	39.858	24.990	1.00	31.37	O
ATOM	236	CB	VAL	A	31	86.288	42.516	25.460	1.00	34.64	C
ATOM	237	CG1	VAL	A	31	85.055	43.296	25.907	1.00	34.16	C
ATOM	238	CG2	VAL	A	31	87.554	43.325	25.763	1.00	33.50	C
ATOM	239	N	ASN	A	32	84.262	40.376	27.125	1.00	32.26	N
ATOM	240	CA	ASN	A	32	82.972	39.695	27.155	1.00	31.85	C
ATOM	241	C	ASN	A	32	81.865	40.737	27.009	1.00	31.43	C
ATOM	242	O	ASN	A	32	81.731	41.614	27.855	1.00	31.95	O
ATOM	243	CB	ASN	A	32	82.837	38.959	28.494	1.00	33.05	C
ATOM	244	CG	ASN	A	32	81.543	38.173	28.618	1.00	34.40	C
ATOM	245	OD1	ASN	A	32	80.616	38.330	27.826	1.00	31.77	O
ATOM	246	ND2	ASN	A	32	81.476	37.325	29.641	1.00	36.34	N
ATOM	247	N	LEU	A	33	81.070	40.638	25.944	1.00	31.73	N
ATOM	248	CA	LEU	A	33	79.986	41.595	25.710	1.00	31.12	C
ATOM	249	C	LEU	A	33	78.604	41.067	26.088	1.00	32.02	C
ATOM	250	O	LEU	A	33	77.582	41.607	25.661	1.00	32.34	O
ATOM	251	CB	LEU	A	33	79.979	42.040	24.244	1.00	32.07	C
ATOM	252	CG	LEU	A	33	81.202	42.819	23.763	1.00	33.24	C
ATOM	253	CD1	LEU	A	33	81.030	43.165	22.300	1.00	33.95	C
ATOM	254	CD2	LEU	A	33	81.380	44.091	24.601	1.00	33.50	C
ATOM	255	N	SER	A	34	78.574	40.003	26.878	1.00	31.24	N
ATOM	256	CA	SER	A	34	77.316	39.419	27.326	1.00	31.29	C
ATOM	257	C	SER	A	34	76.559	40.452	28.180	1.00	30.51	C
ATOM	258	O	SER	A	34	77.172	41.284	28.850	1.00	30.18	O
ATOM	259	CB	SER	A	34	77.613	38.154	28.136	1.00	31.20	C
ATOM	260	OG	SER	A	34	76.447	37.653	28.758	1.00	39.13	O
ATOM	261	N	THR	A	35	75.231	40.403	28.161	1.00	29.56	N
ATOM	262	CA	THR	A	35	74.445	41.364	28.923	1.00	26.77	C
ATOM	263	C	THR	A	35	73.013	40.869	29.167	1.00	27.05	C
ATOM	264	O	THR	A	35	72.435	40.168	28.336	1.00	27.90	O
ATOM	265	CB	THR	A	35	74.416	42.737	28.181	1.00	27.30	C
ATOM	266	OG1	THR	A	35	74.121	43.788	29.110	1.00	25.66	O
ATOM	267	CG2	THR	A	35	73.363	42.738	27.085	1.00	26.06	C
ATOM	268	N	PRO	A	36	72.423	41.233	30.318	1.00	26.43	N
ATOM	269	CA	PRO	A	36	71.058	40.815	30.653	1.00	26.22	C
ATOM	270	C	PRO	A	36	69.955	41.534	29.866	1.00	27.39	C

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ATOM	271	O	PRO	A	36	70.018	42.745	29.641	1.00	26.32	O
ATOM	272	CB	PRO	A	36	70.971	41.094	32.153	1.00	26.70	C
ATOM	273	CG	PRO	A	36	71.839	42.318	32.305	1.00	25.86	C
ATOM	274	CD	PRO	A	36	73.036	41.988	31.429	1.00	24.23	C
ATOM	275	N	LEU	A	37	68.942	40.770	29.468	1.00	27.00	N
ATOM	276	CA	LEU	A	37	67.815	41.295	28.716	1.00	28.26	C
ATOM	277	C	LEU	A	37	66.590	41.525	29.600	1.00	29.30	C
ATOM	278	O	LEU	A	37	65.852	42.489	29.396	1.00	29.95	O
ATOM	279	CB	LEU	A	37	67.444	40.334	27.580	1.00	28.03	C
ATOM	280	CG	LEU	A	37	66.334	40.796	26.631	1.00	27.43	C
ATOM	281	CD1	LEU	A	37	66.879	41.891	25.699	1.00	26.44	C
ATOM	282	CD2	LEU	A	37	65.821	39.615	25.813	1.00	27.22	C
ATOM	283	N	VAL	A	38	66.375	40.650	30.583	1.00	28.72	N
ATOM	284	CA	VAL	A	38	65.214	40.768	31.464	1.00	27.01	C
ATOM	285	C	VAL	A	38	65.588	40.778	32.944	1.00	28.83	C
ATOM	286	O	VAL	A	38	66.633	40.263	33.340	1.00	30.63	O
ATOM	287	CB	VAL	A	38	64.187	39.635	31.178	1.00	28.13	C
ATOM	288	CG1	VAL	A	38	63.710	39.731	29.723	1.00	24.82	C
ATOM	289	CG2	VAL	A	38	64.815	38.265	31.428	1.00	25.61	C
ATOM	290	N	LYS	A	39	64.715	41.364	33.755	1.00	27.51	N
ATOM	291	CA	LYS	A	39	64.950	41.516	35.183	1.00	29.76	C
ATOM	292	C	LYS	A	39	65.127	40.247	36.006	1.00	30.05	C
ATOM	293	O	LYS	A	39	64.584	39.196	35.684	1.00	30.31	O
ATOM	294	CB	LYS	A	39	63.830	42.350	35.812	1.00	29.02	C
ATOM	295	CG	LYS	A	39	62.456	41.677	35.757	1.00	29.38	C
ATOM	296	CD	LYS	A	39	61.439	42.441	36.583	1.00	30.04	C
ATOM	297	CE	LYS	A	39	60.065	41.781	36.528	1.00	31.85	C
ATOM	298	NZ	LYS	A	39	59.125	42.424	37.483	1.00	31.72	N
ATOM	299	N	PHE	A	40	65.887	40.388	37.088	1.00	30.48	N
ATOM	300	CA	PHE	A	40	66.172	39.309	38.019	1.00	31.44	C
ATOM	301	C	PHE	A	40	66.417	39.922	39.392	1.00	32.56	C
ATOM	302	O	PHE	A	40	66.522	41.143	39.518	1.00	33.92	O
ATOM	303	CB	PHE	A	40	67.411	38.516	37.575	1.00	29.74	C
ATOM	304	CG	PHE	A	40	68.624	39.369	37.298	1.00	28.15	C
ATOM	305	CD1	PHE	A	40	68.802	39.971	36.050	1.00	28.42	C
ATOM	306	CD2	PHE	A	40	69.591	39.562	38.279	1.00	27.09	C
ATOM	307	CE1	PHE	A	40	69.928	40.747	35.788	1.00	26.56	C
ATOM	308	CE2	PHE	A	40	70.723	40.336	38.031	1.00	26.08	C
ATOM	309	CZ	PHE	A	40	70.894	40.930	36.783	1.00	27.19	C
ATOM	310	N	GLN	A	41	66.502	39.078	40.415	1.00	33.34	N
ATOM	311	CA	GLN	A	41	66.740	39.538	41.778	1.00	35.08	C
ATOM	312	C	GLN	A	41	68.226	39.523	42.084	1.00	32.98	C
ATOM	313	O	GLN	A	41	68.999	38.848	41.411	1.00	32.25	O
ATOM	314	CB	GLN	A	41	66.039	38.624	42.797	1.00	38.64	C
ATOM	315	CG	GLN	A	41	64.528	38.606	42.729	1.00	45.39	C
ATOM	316	CD	GLN	A	41	63.918	39.959	43.043	1.00	48.32	C
ATOM	317	OE1	GLN	A	41	64.168	40.538	44.105	1.00	51.57	O
ATOM	318	NE2	GLN	A	41	63.113	40.469	42.122	1.00	49.79	N
ATOM	319	N	LYS	A	42	68.605	40.268	43.116	1.00	32.94	N
ATOM	320	CA	LYS	A	42	69.985	40.341	43.580	1.00	34.24	C
ATOM	321	C	LYS	A	42	70.530	38.925	43.835	1.00	34.61	C
ATOM	322	O	LYS	A	42	69.847	38.083	44.429	1.00	32.73	O
ATOM	323	CB	LYS	A	42	70.031	41.148	44.874	1.00	35.33	C
ATOM	324	CG	LYS	A	42	71.390	41.217	45.521	1.00	39.95	C
ATOM	325	CD	LYS	A	42	71.305	41.933	46.855	1.00	42.65	C
ATOM	326	CE	LYS	A	42	72.661	42.007	47.524	1.00	44.06	C
ATOM	327	NZ	LYS	A	42	72.561	42.711	48.829	1.00	48.33	N

ATOM	328	N	GLY	A	43	71.752	38.666	43.381	1.00	34.34	N
ATOM	329	CA	GLY	A	43	72.348	37.355	43.572	1.00	33.96	C
ATOM	330	C	GLY	A	43	72.056	36.394	42.438	1.00	33.07	C
ATOM	331	O	GLY	A	43	72.717	35.365	42.301	1.00	32.56	O
ATOM	332	N	GLN	A	44	71.066	36.726	41.618	1.00	33.56	N
ATOM	333	CA	GLN	A	44	70.695	35.883	40.484	1.00	33.80	C
ATOM	334	C	GLN	A	44	71.315	36.362	39.176	1.00	34.40	C
ATOM	335	O	GLN	A	44	72.039	37.353	39.140	1.00	33.77	O
ATOM	336	CB	GLN	A	44	69.174	35.867	40.311	1.00	35.69	C
ATOM	337	CG	GLN	A	44	68.406	35.347	41.507	1.00	38.03	C
ATOM	338	CD	GLN	A	44	66.898	35.438	41.324	1.00	40.01	C
ATOM	339	OE1	GLN	A	44	66.135	34.847	42.093	1.00	39.88	O
ATOM	340	NE2	GLN	A	44	66.461	36.186	40.310	1.00	35.88	N
ATOM	341	N	GLN	A	45	71.021	35.626	38.110	1.00	35.41	N
ATOM	342	CA	GLN	A	45	71.465	35.936	36.758	1.00	36.43	C
ATOM	343	C	GLN	A	45	70.174	36.046	35.957	1.00	34.87	C
ATOM	344	O	GLN	A	45	69.170	35.438	36.319	1.00	33.83	O
ATOM	345	CB	GLN	A	45	72.312	34.800	36.170	1.00	40.80	C
ATOM	346	CG	GLN	A	45	73.682	34.634	36.801	1.00	46.43	C
ATOM	347	CD	GLN	A	45	74.527	35.881	36.657	1.00	50.68	C
ATOM	348	OE1	GLN	A	45	74.757	36.360	35.543	1.00	54.30	O
ATOM	349	NE2	GLN	A	45	74.995	36.418	37.784	1.00	50.86	N
ATOM	350	N	SER	A	46	70.194	36.820	34.881	1.00	32.16	N
ATOM	351	CA	SER	A	46	69.009	36.976	34.056	1.00	32.64	C
ATOM	352	C	SER	A	46	68.721	35.690	33.289	1.00	33.23	C
ATOM	353	O	SER	A	46	69.643	35.015	32.836	1.00	32.72	O
ATOM	354	CB	SER	A	46	69.204	38.120	33.059	1.00	30.63	C
ATOM	355	OG	SER	A	46	68.058	38.282	32.252	1.00	30.42	O
ATOM	356	N	GLU	A	47	67.441	35.364	33.133	1.00	33.48	N
ATOM	357	CA	GLU	A	47	67.047	34.167	32.399	1.00	34.97	C
ATOM	358	C	GLU	A	47	67.453	34.269	30.936	1.00	34.59	C
ATOM	359	O	GLU	A	47	67.588	33.261	30.251	1.00	34.40	O
ATOM	360	CB	GLU	A	47	65.536	33.963	32.492	1.00	36.97	C
ATOM	361	CG	GLU	A	47	65.048	33.634	33.884	1.00	40.19	C
ATOM	362	CD	GLU	A	47	63.541	33.663	33.982	1.00	43.59	C
ATOM	363	OE1	GLU	A	47	62.884	32.836	33.313	1.00	46.14	O
ATOM	364	OE2	GLU	A	47	63.010	34.519	34.726	1.00	45.57	O
ATOM	365	N	ILE	A	48	67.633	35.494	30.452	1.00	34.08	N
ATOM	366	CA	ILE	A	48	68.032	35.702	29.066	1.00	32.00	C
ATOM	367	C	ILE	A	48	69.188	36.698	28.991	1.00	31.52	C
ATOM	368	O	ILE	A	48	69.075	37.847	29.418	1.00	30.71	O
ATOM	369	CB	ILE	A	48	66.851	36.231	28.204	1.00	32.81	C
ATOM	370	CG1	ILE	A	48	65.671	35.254	28.264	1.00	33.69	C
ATOM	371	CG2	ILE	A	48	67.307	36.419	26.764	1.00	32.09	C
ATOM	372	CD1	ILE	A	48	64.439	35.718	27.503	1.00	34.71	C
ATOM	373	N	ASN	A	49	70.306	36.241	28.449	1.00	30.86	N
ATOM	374	CA	ASN	A	49	71.483	37.076	28.308	1.00	31.23	C
ATOM	375	C	ASN	A	49	71.892	37.131	26.851	1.00	31.45	C
ATOM	376	O	ASN	A	49	72.070	36.095	26.214	1.00	31.67	O
ATOM	377	CB	ASN	A	49	72.636	36.514	29.154	1.00	30.33	C
ATOM	378	CG	ASN	A	49	72.393	36.676	30.640	1.00	31.43	C
ATOM	379	OD1	ASN	A	49	72.573	37.757	31.193	1.00	28.79	O
ATOM	380	ND2	ASN	A	49	71.958	35.602	31.292	1.00	32.52	N
ATOM	381	N	LEU	A	50	72.017	38.343	26.321	1.00	30.27	N
ATOM	382	CA	LEU	A	50	72.440	38.523	24.937	1.00	30.28	C
ATOM	383	C	LEU	A	50	73.947	38.255	24.904	1.00	30.37	C
ATOM	384	O	LEU	A	50	74.624	38.437	25.916	1.00	30.24	O

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ATOM	385	CB	LEU	A	50	72.174	39.965	24.476	1.00	28.53	C
ATOM	386	CG	LEU	A	50	70.755	40.537	24.591	1.00	30.96	C
ATOM	387	CD1	LEU	A	50	70.767	42.022	24.227	1.00	30.43	C
ATOM	388	CD2	LEU	A	50	69.807	39.769	23.673	1.00	30.05	C
ATOM	389	N	LYS	A	51	74.461	37.821	23.755	1.00	30.78	N
ATOM	390	CA	LYS	A	51	75.896	37.572	23.590	1.00	32.78	C
ATOM	391	C	LYS	A	51	76.563	38.904	23.231	1.00	31.15	C
ATOM	392	O	LYS	A	51	77.740	39.120	23.516	1.00	31.86	O
ATOM	393	CB	LYS	A	51	76.157	36.549	22.470	1.00	33.00	C
ATOM	394	CG	LYS	A	51	76.430	35.127	22.945	1.00	37.03	C
ATOM	395	CD	LYS	A	51	75.265	34.540	23.694	1.00	39.28	C
ATOM	396	CE	LYS	A	51	75.548	33.103	24.116	1.00	42.58	C
ATOM	397	NZ	LYS	A	51	75.773	32.190	22.957	1.00	43.64	N
ATOM	398	N	ILE	A	52	75.802	39.777	22.571	1.00	29.58	N
ATOM	399	CA	ILE	A	52	76.266	41.114	22.209	1.00	28.26	C
ATOM	400	C	ILE	A	52	75.126	42.049	22.607	1.00	28.67	C
ATOM	401	O	ILE	A	52	73.954	41.700	22.476	1.00	30.64	O
ATOM	402	CB	ILE	A	52	76.597	41.248	20.689	1.00	29.21	C
ATOM	403	CG1	ILE	A	52	75.369	40.926	19.832	1.00	29.71	C
ATOM	404	CG2	ILE	A	52	77.768	40.317	20.326	1.00	28.36	C
ATOM	405	CD1	ILE	A	52	75.591	41.184	18.343	1.00	25.96	C
ATOM	406	N	PRO	A	53	75.451	43.253	23.091	1.00	27.43	N
ATOM	407	CA	PRO	A	53	74.436	44.217	23.521	1.00	27.51	C
ATOM	408	C	PRO	A	53	73.665	44.991	22.453	1.00	28.48	C
ATOM	409	O	PRO	A	53	73.321	46.152	22.667	1.00	28.86	O
ATOM	410	CB	PRO	A	53	75.231	45.140	24.431	1.00	25.91	C
ATOM	411	CG	PRO	A	53	76.535	45.245	23.685	1.00	27.35	C
ATOM	412	CD	PRO	A	53	76.808	43.810	23.255	1.00	27.52	C
ATOM	413	N	LEU	A	54	73.376	44.360	21.319	1.00	27.64	N
ATOM	414	CA	LEU	A	54	72.639	45.048	20.266	1.00	28.10	C
ATOM	415	C	LEU	A	54	71.310	44.369	19.933	1.00	28.75	C
ATOM	416	O	LEU	A	54	71.233	43.142	19.847	1.00	29.19	O
ATOM	417	CB	LEU	A	54	73.486	45.135	18.989	1.00	26.86	C
ATOM	418	CG	LEU	A	54	74.898	45.720	19.078	1.00	27.96	C
ATOM	419	CD1	LEU	A	54	75.549	45.652	17.707	1.00	25.98	C
ATOM	420	CD2	LEU	A	54	74.857	47.159	19.584	1.00	28.24	C
ATOM	421	N	VAL	A	55	70.261	45.171	19.770	1.00	27.85	N
ATOM	422	CA	VAL	A	55	68.957	44.649	19.388	1.00	28.01	C
ATOM	423	C	VAL	A	55	68.426	45.554	18.276	1.00	29.53	C
ATOM	424	O	VAL	A	55	68.649	46.768	18.299	1.00	30.35	O
ATOM	425	CB	VAL	A	55	67.947	44.605	20.579	1.00	26.85	C
ATOM	426	CG1	VAL	A	55	68.531	43.797	21.725	1.00	25.48	C
ATOM	427	CG2	VAL	A	55	67.569	45.998	21.021	1.00	26.54	C
ATOM	428	N	SER	A	56	67.765	44.961	17.284	1.00	28.53	N
ATOM	429	CA	SER	A	56	67.224	45.735	16.174	1.00	28.75	C
ATOM	430	C	SER	A	56	65.855	46.310	16.533	1.00	27.91	C
ATOM	431	O	SER	A	56	65.070	45.694	17.253	1.00	29.11	O
ATOM	432	CB	SER	A	56	67.166	44.878	14.897	1.00	28.24	C
ATOM	433	OG	SER	A	56	66.443	43.676	15.091	1.00	30.49	O
ATOM	434	N	ALA	A	57	65.594	47.512	16.037	1.00	27.60	N
ATOM	435	CA	ALA	A	57	64.363	48.241	16.318	1.00	27.21	C
ATOM	436	C	ALA	A	57	63.062	47.574	15.876	1.00	29.66	C
ATOM	437	O	ALA	A	57	63.030	46.784	14.931	1.00	29.73	O
ATOM	438	CB	ALA	A	57	64.460	49.640	15.721	1.00	25.06	C
ATOM	439	N	ILE	A	58	61.990	47.911	16.581	1.00	28.79	N
ATOM	440	CA	ILE	A	58	60.660	47.379	16.302	1.00	30.03	C
ATOM	441	C	ILE	A	58	60.085	48.199	15.148	1.00	30.02	C

TABLE 2

ATOM	442	O	ILE	A	58	59.148	48.983	15.327	1.00	30.35	O
ATOM	443	CB	ILE	A	58	59.765	47.524	17.546	1.00	28.25	C
ATOM	444	CG1	ILE	A	58	60.560	47.095	18.788	1.00	27.95	C
ATOM	445	CG2	ILE	A	58	58.508	46.677	17.390	1.00	27.16	C
ATOM	446	CD1	ILE	A	58	59.785	47.176	20.078	1.00	28.05	C
ATOM	447	N	MET	A	59	60.661	47.998	13.965	1.00	30.49	N
ATOM	448	CA	MET	A	59	60.275	48.743	12.772	1.00	31.82	C
ATOM	449	C	MET	A	59	60.088	47.877	11.530	1.00	32.36	C
ATOM	450	O	MET	A	59	60.864	46.954	11.282	1.00	31.48	O
ATOM	451	CB	MET	A	59	61.341	49.799	12.479	1.00	30.41	C
ATOM	452	CG	MET	A	59	61.619	50.738	13.635	1.00	28.79	C
ATOM	453	SD	MET	A	59	62.996	51.827	13.284	1.00	31.66	S
ATOM	454	CE	MET	A	59	62.278	52.935	12.079	1.00	26.93	C
ATOM	455	N	GLN	A	60	59.072	48.208	10.736	1.00	34.40	N
ATOM	456	CA	GLN	A	60	58.772	47.459	9.512	1.00	36.49	C
ATOM	457	C	GLN	A	60	59.974	47.433	8.582	1.00	36.55	C
ATOM	458	O	GLN	A	60	60.208	46.447	7.885	1.00	37.12	O
ATOM	459	CB	GLN	A	60	57.604	48.092	8.741	1.00	36.94	C
ATOM	460	CG	GLN	A	60	56.360	48.433	9.546	1.00	37.40	C
ATOM	461	CD	GLN	A	60	55.273	49.031	8.666	1.00	40.00	C
ATOM	462	OE1	GLN	A	60	55.562	49.808	7.753	1.00	39.70	O
ATOM	463	NE2	GLN	A	60	54.018	48.677	8.936	1.00	40.59	N
ATOM	464	N	SER	A	61	60.730	48.526	8.572	1.00	36.66	N
ATOM	465	CA	SER	A	61	61.890	48.645	7.694	1.00	36.60	C
ATOM	466	C	SER	A	61	63.196	48.130	8.286	1.00	36.12	C
ATOM	467	O	SER	A	61	64.274	48.388	7.738	1.00	36.48	O
ATOM	468	CB	SER	A	61	62.073	50.105	7.280	1.00	35.62	C
ATOM	469	OG	SER	A	61	62.314	50.921	8.414	1.00	41.10	O
ATOM	470	N	VAL	A	62	63.111	47.393	9.386	1.00	34.72	N
ATOM	471	CA	VAL	A	62	64.320	46.893	10.020	1.00	33.57	C
ATOM	472	C	VAL	A	62	64.273	45.444	10.472	1.00	33.65	C
ATOM	473	O	VAL	A	62	65.067	44.625	10.022	1.00	35.33	O
ATOM	474	CB	VAL	A	62	64.692	47.757	11.253	1.00	32.43	C
ATOM	475	CG1	VAL	A	62	65.900	47.160	11.970	1.00	32.00	C
ATOM	476	CG2	VAL	A	62	64.983	49.189	10.820	1.00	32.49	C
ATOM	477	N	SER	A	63	63.337	45.133	11.361	1.00	34.80	N
ATOM	478	CA	SER	A	63	63.245	43.799	11.926	1.00	34.50	C
ATOM	479	C	SER	A	63	62.258	42.804	11.322	1.00	35.59	C
ATOM	480	O	SER	A	63	61.149	42.610	11.830	1.00	33.23	O
ATOM	481	CB	SER	A	63	62.999	43.916	13.431	1.00	33.57	C
ATOM	482	OG	SER	A	63	64.061	44.620	14.062	1.00	32.53	O
ATOM	483	N	GLY	A	64	62.686	42.168	10.240	1.00	36.21	N
ATOM	484	CA	GLY	A	64	61.874	41.154	9.602	1.00	37.02	C
ATOM	485	C	GLY	A	64	62.487	39.815	9.979	1.00	39.12	C
ATOM	486	O	GLY	A	64	63.403	39.764	10.811	1.00	36.38	O
ATOM	487	N	GLU	A	65	62.011	38.736	9.364	1.00	39.92	N
ATOM	488	CA	GLU	A	65	62.522	37.405	9.665	1.00	42.75	C
ATOM	489	C	GLU	A	65	64.015	37.240	9.395	1.00	42.41	C
ATOM	490	O	GLU	A	65	64.731	36.649	10.201	1.00	41.59	O
ATOM	491	CB	GLU	A	65	61.735	36.332	8.892	1.00	46.22	C
ATOM	492	CG	GLU	A	65	61.608	36.565	7.385	1.00	51.45	C
ATOM	493	CD	GLU	A	65	60.419	37.448	7.007	1.00	55.41	C
ATOM	494	OE1	GLU	A	65	60.438	38.668	7.305	1.00	55.84	O
ATOM	495	OE2	GLU	A	65	59.456	36.915	6.405	1.00	57.74	O
ATOM	496	N	LYS	A	66	64.485	37.764	8.268	1.00	42.65	N
ATOM	497	CA	LYS	A	66	65.895	37.647	7.914	1.00	44.04	C
ATOM	498	C	LYS	A	66	66.801	38.387	8.897	1.00	41.64	C

TABLE 2

ATOM	499	O	LYS	A	66	67.854	37.879	9.287	1.00	39.47	O
ATOM	500	CB	LYS	A	66	66.132	38.169	6.494	1.00	46.38	C
ATOM	501	CG	LYS	A	66	65.289	37.488	5.415	1.00	52.36	C
ATOM	502	CD	LYS	A	66	65.540	35.975	5.309	1.00	56.28	C
ATOM	503	CE	LYS	A	66	64.795	35.174	6.387	1.00	58.02	C
ATOM	504	NZ	LYS	A	66	64.957	33.692	6.235	1.00	57.63	N
ATOM	505	N	MET	A	67	66.393	39.588	9.289	1.00	39.83	N
ATOM	506	CA	MET	A	67	67.168	40.376	10.237	1.00	37.79	C
ATOM	507	C	MET	A	67	67.305	39.592	11.541	1.00	37.63	C
ATOM	508	O	MET	A	67	68.409	39.413	12.061	1.00	36.92	O
ATOM	509	CB	MET	A	67	66.472	41.710	10.512	1.00	37.57	C
ATOM	510	CG	MET	A	67	67.214	42.614	11.485	1.00	37.05	C
ATOM	511	SD	MET	A	67	68.849	43.062	10.880	1.00	36.99	S
ATOM	512	CE	MET	A	67	68.422	44.225	9.565	1.00	34.40	C
ATOM	513	N	ALA	A	68	66.173	39.111	12.047	1.00	35.24	N
ATOM	514	CA	ALA	A	68	66.133	38.356	13.290	1.00	35.08	C
ATOM	515	C	ALA	A	68	67.079	37.157	13.296	1.00	35.81	C
ATOM	516	O	ALA	A	68	67.714	36.868	14.310	1.00	34.68	O
ATOM	517	CB	ALA	A	68	64.707	37.901	13.571	1.00	34.00	C
ATOM	518	N	ILE	A	69	67.169	36.460	12.167	1.00	35.92	N
ATOM	519	CA	ILE	A	69	68.043	35.298	12.063	1.00	36.63	C
ATOM	520	C	ILE	A	69	69.510	35.729	12.016	1.00	35.80	C
ATOM	521	O	ILE	A	69	70.344	35.204	12.754	1.00	37.14	O
ATOM	522	CB	ILE	A	69	67.694	34.456	10.804	1.00	38.10	C
ATOM	523	CG1	ILE	A	69	66.314	33.814	10.982	1.00	39.72	C
ATOM	524	CG2	ILE	A	69	68.739	33.375	10.580	1.00	37.50	C
ATOM	525	CD1	ILE	A	69	65.712	33.259	9.695	1.00	40.53	C
ATOM	526	N	ALA	A	70	69.816	36.697	11.160	1.00	34.80	N
ATOM	527	CA	ALA	A	70	71.179	37.194	11.027	1.00	34.57	C
ATOM	528	C	ALA	A	70	71.727	37.773	12.332	1.00	34.76	C
ATOM	529	O	ALA	A	70	72.897	37.563	12.665	1.00	34.89	O
ATOM	530	CB	ALA	A	70	71.244	38.246	9.932	1.00	33.76	C
ATOM	531	N	LEU	A	71	70.886	38.501	13.066	1.00	34.07	N
ATOM	532	CA	LEU	A	71	71.315	39.113	14.318	1.00	32.78	C
ATOM	533	C	LEU	A	71	71.451	38.095	15.436	1.00	33.19	C
ATOM	534	O	LEU	A	71	72.390	38.164	16.223	1.00	32.88	O
ATOM	535	CB	LEU	A	71	70.348	40.223	14.737	1.00	31.82	C
ATOM	536	CG	LEU	A	71	70.677	41.001	16.021	1.00	31.91	C
ATOM	537	CD1	LEU	A	71	72.140	41.434	16.021	1.00	31.18	C
ATOM	538	CD2	LEU	A	71	69.758	42.226	16.127	1.00	30.99	C
ATOM	539	N	ALA	A	72	70.515	37.151	15.506	1.00	33.38	N
ATOM	540	CA	ALA	A	72	70.566	36.120	16.534	1.00	34.54	C
ATOM	541	C	ALA	A	72	71.820	35.272	16.354	1.00	36.16	C
ATOM	542	O	ALA	A	72	72.385	34.775	17.332	1.00	35.90	O
ATOM	543	CB	ALA	A	72	69.318	35.234	16.468	1.00	32.94	C
ATOM	544	N	ARG	A	73	72.242	35.103	15.102	1.00	37.20	N
ATOM	545	CA	ARG	A	73	73.433	34.316	14.791	1.00	40.02	C
ATOM	546	C	ARG	A	73	74.685	34.954	15.376	1.00	40.27	C
ATOM	547	O	ARG	A	73	75.641	34.259	15.711	1.00	39.91	O
ATOM	548	CB	ARG	A	73	73.618	34.177	13.276	1.00	42.94	C
ATOM	549	CG	ARG	A	73	72.702	33.172	12.595	1.00	45.30	C
ATOM	550	CD	ARG	A	73	72.948	33.169	11.090	1.00	48.88	C
ATOM	551	NE	ARG	A	73	72.151	32.162	10.401	1.00	53.31	N
ATOM	552	CZ	ARG	A	73	71.960	32.126	9.084	1.00	55.75	C
ATOM	553	NH1	ARG	A	73	72.509	33.049	8.300	1.00	56.63	N
ATOM	554	NH2	ARG	A	73	71.216	31.166	8.549	1.00	56.55	N
ATOM	555	N	GLU	A	74	74.676	36.281	15.488	1.00	40.14	N



TABLE 2

ATOM	556	CA	GLU	A	74	75.819	37.003	16.025	1.00	38.77	C
ATOM	557	C	GLU	A	74	75.711	37.229	17.531	1.00	36.73	C
ATOM	558	O	GLU	A	74	76.634	37.750	18.144	1.00	37.21	O
ATOM	559	CB	GLU	A	74	75.979	38.347	15.310	1.00	40.15	C
ATOM	560	CG	GLU	A	74	76.113	38.239	13.796	1.00	42.93	C
ATOM	561	CD	GLU	A	74	77.234	37.301	13.357	1.00	44.79	C
ATOM	562	OE1	GLU	A	74	78.397	37.518	13.762	1.00	47.17	O
ATOM	563	OE2	GLU	A	74	76.948	36.347	12.601	1.00	46.07	O
ATOM	564	N	GLY	A	75	74.586	36.851	18.127	1.00	35.85	N
ATOM	565	CA	GLY	A	75	74.436	37.026	19.562	1.00	35.85	C
ATOM	566	C	GLY	A	75	73.429	38.056	20.044	1.00	35.01	C
ATOM	567	O	GLY	A	75	73.169	38.148	21.243	1.00	34.48	O
ATOM	568	N	GLY	A	76	72.875	38.840	19.126	1.00	34.39	N
ATOM	569	CA	GLY	A	76	71.887	39.834	19.513	1.00	33.62	C
ATOM	570	C	GLY	A	76	70.483	39.299	19.281	1.00	32.89	C
ATOM	571	O	GLY	A	76	70.315	38.101	19.025	1.00	32.03	O
ATOM	572	N	ILE	A	77	69.475	40.165	19.374	1.00	31.21	N
ATOM	573	CA	ILE	A	77	68.096	39.735	19.151	1.00	31.46	C
ATOM	574	C	ILE	A	77	67.282	40.820	18.439	1.00	32.84	C
ATOM	575	O	ILE	A	77	67.531	42.021	18.611	1.00	31.99	O
ATOM	576	CB	ILE	A	77	67.400	39.369	20.484	1.00	30.05	C
ATOM	577	CG1	ILE	A	77	66.190	38.470	20.213	1.00	29.38	C
ATOM	578	CG2	ILE	A	77	66.954	40.644	21.220	1.00	27.82	C
ATOM	579	CD1	ILE	A	77	65.442	38.047	21.474	1.00	26.08	C
ATOM	580	N	SER	A	78	66.312	40.390	17.637	1.00	32.97	N
ATOM	581	CA	SER	A	78	65.456	41.317	16.904	1.00	32.44	C
ATOM	582	C	SER	A	78	64.049	41.320	17.472	1.00	32.06	C
ATOM	583	O	SER	A	78	63.592	40.322	18.016	1.00	34.00	O
ATOM	584	CB	SER	A	78	65.382	40.930	15.424	1.00	30.67	C
ATOM	585	OG	SER	A	78	66.616	41.134	14.768	1.00	30.87	O
ATOM	586	N	PHE	A	79	63.369	42.453	17.351	1.00	32.02	N
ATOM	587	CA	PHE	A	79	61.998	42.562	17.816	1.00	31.78	C
ATOM	588	C	PHE	A	79	61.105	42.740	16.596	1.00	31.81	C
ATOM	589	O	PHE	A	79	60.896	43.854	16.130	1.00	33.21	O
ATOM	590	CB	PHE	A	79	61.830	43.747	18.780	1.00	30.40	C
ATOM	591	CG	PHE	A	79	62.408	43.500	20.145	1.00	29.75	C
ATOM	592	CD1	PHE	A	79	63.754	43.732	20.401	1.00	31.91	C
ATOM	593	CD2	PHE	A	79	61.611	42.994	21.169	1.00	30.82	C
ATOM	594	CE1	PHE	A	79	64.302	43.462	21.663	1.00	32.55	C
ATOM	595	CE2	PHE	A	79	62.145	42.719	22.428	1.00	29.78	C
ATOM	596	CZ	PHE	A	79	63.490	42.953	22.676	1.00	30.40	C
ATOM	597	N	ILE	A	80	60.603	41.628	16.071	1.00	32.06	N
ATOM	598	CA	ILE	A	80	59.726	41.651	14.902	1.00	32.86	C
ATOM	599	C	ILE	A	80	58.677	42.748	15.075	1.00	32.33	C
ATOM	600	O	ILE	A	80	57.963	42.781	16.084	1.00	32.22	O
ATOM	601	CB	ILE	A	80	59.015	40.282	14.717	1.00	32.80	C
ATOM	602	CG1	ILE	A	80	60.056	39.175	14.529	1.00	33.69	C
ATOM	603	CG2	ILE	A	80	58.082	40.329	13.508	1.00	35.09	C
ATOM	604	CD1	ILE	A	80	60.974	39.387	13.347	1.00	32.85	C
ATOM	605	N	PHE	A	81	58.581	43.643	14.095	1.00	32.37	N
ATOM	606	CA	PHE	A	81	57.627	44.740	14.186	1.00	33.33	C
ATOM	607	C	PHE	A	81	56.188	44.274	14.368	1.00	34.02	C
ATOM	608	O	PHE	A	81	55.771	43.271	13.792	1.00	33.19	O
ATOM	609	CB	PHE	A	81	57.731	45.676	12.966	1.00	33.82	C
ATOM	610	CG	PHE	A	81	57.438	45.016	11.643	1.00	34.92	C
ATOM	611	CD1	PHE	A	81	58.376	44.191	11.033	1.00	35.21	C
ATOM	612	CD2	PHE	A	81	56.224	45.241	10.995	1.00	36.11	C

TABLE 2

ATOM	613	CE1	PHE	A	81	58.113	43.600	9.791	1.00	34.85	C
ATOM	614	CE2	PHE	A	81	55.947	44.658	9.756	1.00	36.53	C
ATOM	615	CZ	PHE	A	81	56.895	43.836	9.153	1.00	36.94	C
ATOM	616	N	GLY	A	82	55.441	45.014	15.184	1.00	33.59	N
ATOM	617	CA	GLY	A	82	54.055	44.675	15.439	1.00	34.64	C
ATOM	618	C	GLY	A	82	53.078	45.472	14.596	1.00	35.83	C
ATOM	619	O	GLY	A	82	51.870	45.283	14.708	1.00	36.22	O
ATOM	620	N	SER	A	83	53.594	46.363	13.753	1.00	35.37	N
ATOM	621	CA	SER	A	83	52.744	47.173	12.886	1.00	35.72	C
ATOM	622	C	SER	A	83	52.379	46.393	11.618	1.00	36.39	C
ATOM	623	O	SER	A	83	52.701	46.791	10.496	1.00	35.68	O
ATOM	624	CB	SER	A	83	53.456	48.476	12.522	1.00	34.36	C
ATOM	625	OG	SER	A	83	54.710	48.208	11.928	1.00	35.50	O
ATOM	626	N	GLN	A	84	51.714	45.264	11.826	1.00	37.28	N
ATOM	627	CA	GLN	A	84	51.270	44.387	10.753	1.00	38.09	C
ATOM	628	C	GLN	A	84	50.229	43.474	11.394	1.00	38.74	C
ATOM	629	O	GLN	A	84	50.021	43.542	12.604	1.00	37.63	O
ATOM	630	CB	GLN	A	84	52.445	43.569	10.214	1.00	39.17	C
ATOM	631	CG	GLN	A	84	53.074	42.636	11.235	1.00	40.30	C
ATOM	632	CD	GLN	A	84	54.255	41.877	10.668	1.00	43.44	C
ATOM	633	OE1	GLN	A	84	54.155	41.259	9.607	1.00	45.87	O
ATOM	634	NE2	GLN	A	84	55.383	41.912	11.375	1.00	43.38	N
ATOM	635	N	SER	A	85	49.577	42.626	10.605	1.00	39.77	N
ATOM	636	CA	SER	A	85	48.556	41.739	11.163	1.00	40.71	C
ATOM	637	C	SER	A	85	49.138	40.766	12.182	1.00	41.13	C
ATOM	638	O	SER	A	85	50.301	40.373	12.088	1.00	41.44	O
ATOM	639	CB	SER	A	85	47.868	40.938	10.055	1.00	40.69	C
ATOM	640	OG	SER	A	85	48.608	39.771	9.743	1.00	41.94	O
ATOM	641	N	ILE	A	86	48.314	40.377	13.150	1.00	41.34	N
ATOM	642	CA	ILE	A	86	48.721	39.437	14.187	1.00	43.32	C
ATOM	643	C	ILE	A	86	49.213	38.134	13.552	1.00	45.69	C
ATOM	644	O	ILE	A	86	50.207	37.550	13.992	1.00	45.58	O
ATOM	645	CB	ILE	A	86	47.540	39.117	15.132	1.00	42.04	C
ATOM	646	CG1	ILE	A	86	47.139	40.379	15.904	1.00	42.78	C
ATOM	647	CG2	ILE	A	86	47.913	37.986	16.075	1.00	40.93	C
ATOM	648	CD1	ILE	A	86	45.948	40.191	16.833	1.00	40.98	C
ATOM	649	N	GLU	A	87	48.511	37.690	12.513	1.00	46.91	N
ATOM	650	CA	GLU	A	87	48.860	36.460	11.809	1.00	48.52	C
ATOM	651	C	GLU	A	87	50.201	36.612	11.104	1.00	46.94	C
ATOM	652	O	GLU	A	87	51.025	35.700	11.098	1.00	47.16	O
ATOM	653	CB	GLU	A	87	47.784	36.117	10.767	1.00	50.61	C
ATOM	654	CG	GLU	A	87	46.364	35.944	11.318	1.00	54.49	C
ATOM	655	CD	GLU	A	87	45.799	37.214	11.955	1.00	57.21	C
ATOM	656	OE1	GLU	A	87	45.896	38.300	11.337	1.00	57.37	O
ATOM	657	OE2	GLU	A	87	45.241	37.121	13.074	1.00	59.49	O
ATOM	658	N	SER	A	88	50.408	37.778	10.508	1.00	46.26	N
ATOM	659	CA	SER	A	88	51.637	38.064	9.778	1.00	45.86	C
ATOM	660	C	SER	A	88	52.865	38.124	10.692	1.00	44.29	C
ATOM	661	O	SER	A	88	53.921	37.584	10.363	1.00	43.79	O
ATOM	662	CB	SER	A	88	51.480	39.384	9.024	1.00	46.24	C
ATOM	663	OG	SER	A	88	52.551	39.587	8.126	1.00	50.64	O
ATOM	664	N	GLN	A	89	52.725	38.781	11.838	1.00	42.05	N
ATOM	665	CA	GLN	A	89	53.831	38.902	12.784	1.00	41.12	C
ATOM	666	C	GLN	A	89	54.164	37.534	13.378	1.00	40.97	C
ATOM	667	O	GLN	A	89	55.331	37.147	13.464	1.00	41.60	O
ATOM	668	CB	GLN	A	89	53.474	39.895	13.904	1.00	37.36	C
ATOM	669	CG	GLN	A	89	54.563	40.076	14.967	1.00	34.71	C

TABLE 2

ATOM	670	CD	GLN	A	89	54.182	41.087	16.042	1.00	32.75	C
ATOM	671	OE1	GLN	A	89	53.004	41.260	16.354	1.00	29.71	O
ATOM	672	NE2	GLN	A	89	55.183	41.740	16.630	1.00	30.65	N
ATOM	673	N	ALA	A	90	53.132	36.798	13.778	1.00	41.05	N
ATOM	674	CA	ALA	A	90	53.326	35.478	14.363	1.00	40.85	C
ATOM	675	C	ALA	A	90	54.027	34.536	13.386	1.00	40.83	C
ATOM	676	O	ALA	A	90	54.828	33.697	13.790	1.00	42.16	O
ATOM	677	CB	ALA	A	90	51.988	34.896	14.790	1.00	40.56	C
ATOM	678	N	ALA	A	91	53.733	34.676	12.099	1.00	40.30	N
ATOM	679	CA	ALA	A	91	54.364	33.822	11.106	1.00	41.24	C
ATOM	680	C	ALA	A	91	55.873	34.065	11.106	1.00	41.52	C
ATOM	681	O	ALA	A	91	56.661	33.124	11.032	1.00	42.19	O
ATOM	682	CB	ALA	A	91	53.776	34.092	9.714	1.00	38.85	C
ATOM	683	N	MET	A	92	56.278	35.327	11.192	1.00	41.97	N
ATOM	684	CA	MET	A	92	57.702	35.651	11.208	1.00	42.09	C
ATOM	685	C	MET	A	92	58.386	35.064	12.438	1.00	41.02	C
ATOM	686	O	MET	A	92	59.513	34.579	12.360	1.00	40.61	O
ATOM	687	CB	MET	A	92	57.910	37.165	11.181	1.00	42.37	C
ATOM	688	CG	MET	A	92	57.542	37.806	9.867	1.00	41.26	C
ATOM	689	SD	MET	A	92	57.939	39.549	9.851	1.00	41.37	S
ATOM	690	CE	MET	A	92	56.946	40.100	8.458	1.00	41.08	C
ATOM	691	N	VAL	A	93	57.702	35.116	13.574	1.00	41.53	N
ATOM	692	CA	VAL	A	93	58.256	34.578	14.808	1.00	41.04	C
ATOM	693	C	VAL	A	93	58.434	33.077	14.645	1.00	42.35	C
ATOM	694	O	VAL	A	93	59.480	32.524	14.979	1.00	42.28	O
ATOM	695	CB	VAL	A	93	57.325	34.857	16.004	1.00	41.44	C
ATOM	696	CG1	VAL	A	93	57.777	34.058	17.222	1.00	39.20	C
ATOM	697	CG2	VAL	A	93	57.324	36.350	16.315	1.00	39.63	C
ATOM	698	N	HIS	A	94	57.401	32.426	14.119	1.00	43.29	N
ATOM	699	CA	HIS	A	94	57.421	30.984	13.898	1.00	43.16	C
ATOM	700	C	HIS	A	94	58.579	30.600	12.982	1.00	42.12	C
ATOM	701	O	HIS	A	94	59.320	29.657	13.261	1.00	41.10	O
ATOM	702	CB	HIS	A	94	56.100	30.538	13.263	1.00	45.51	C
ATOM	703	CG	HIS	A	94	55.983	29.056	13.087	1.00	46.61	C
ATOM	704	ND1	HIS	A	94	55.628	28.210	14.116	1.00	46.66	N
ATOM	705	CD2	HIS	A	94	56.193	28.268	12.006	1.00	46.86	C
ATOM	706	CE1	HIS	A	94	55.624	26.965	13.677	1.00	46.63	C
ATOM	707	NE2	HIS	A	94	55.964	26.972	12.400	1.00	47.89	N
ATOM	708	N	ALA	A	95	58.727	31.339	11.888	1.00	41.47	N
ATOM	709	CA	ALA	A	95	59.788	31.080	10.921	1.00	41.48	C
ATOM	710	C	ALA	A	95	61.168	31.132	11.567	1.00	42.50	C
ATOM	711	O	ALA	A	95	62.017	30.282	11.306	1.00	42.88	O
ATOM	712	CB	ALA	A	95	59.712	32.088	9.783	1.00	40.24	C
ATOM	713	N	VAL	A	96	61.394	32.138	12.407	1.00	42.32	N
ATOM	714	CA	VAL	A	96	62.680	32.289	13.074	1.00	40.88	C
ATOM	715	C	VAL	A	96	62.923	31.140	14.049	1.00	41.55	C
ATOM	716	O	VAL	A	96	64.011	30.566	14.086	1.00	41.75	O
ATOM	717	CB	VAL	A	96	62.755	33.635	13.837	1.00	40.31	C
ATOM	718	CG1	VAL	A	96	64.044	33.719	14.643	1.00	38.83	C
ATOM	719	CG2	VAL	A	96	62.684	34.787	12.849	1.00	40.30	C
ATOM	720	N	LYS	A	97	61.897	30.802	14.823	1.00	42.33	N
ATOM	721	CA	LYS	A	97	61.989	29.735	15.810	1.00	44.12	C
ATOM	722	C	LYS	A	97	62.197	28.349	15.206	1.00	46.23	C
ATOM	723	O	LYS	A	97	62.787	27.475	15.843	1.00	46.86	O
ATOM	724	CB	LYS	A	97	60.730	29.718	16.686	1.00	43.33	C
ATOM	725	CG	LYS	A	97	60.484	31.004	17.471	1.00	42.58	C
ATOM	726	CD	LYS	A	97	61.669	31.349	18.374	1.00	40.95	C

TABLE 2

ATOM	727	CE	LYS	A	97	61.894	30.305	19.461	1.00	39.70	C
ATOM	728	NZ	LYS	A	97	63.158	30.559	20.212	1.00	38.22	N
ATOM	729	N	ASN	A	98	61.713	28.143	13.985	1.00	48.10	N
ATOM	730	CA	ASN	A	98	61.844	26.842	13.338	1.00	51.26	C
ATOM	731	C	ASN	A	98	62.675	26.897	12.062	1.00	52.29	C
ATOM	732	O	ASN	A	98	62.383	26.192	11.096	1.00	53.51	O
ATOM	733	CB	ASN	A	98	60.456	26.274	13.023	1.00	52.57	C
ATOM	734	CG	ASN	A	98	59.599	26.102	14.264	1.00	54.13	C
ATOM	735	OD1	ASN	A	98	59.898	25.286	15.139	1.00	56.37	O
ATOM	736	ND2	ASN	A	98	58.527	26.876	14.349	1.00	55.61	N
ATOM	737	N	PHE	A	99	63.713	27.728	12.063	1.00	53.22	N
ATOM	738	CA	PHE	A	99	64.579	27.872	10.897	1.00	54.26	C
ATOM	739	C	PHE	A	99	65.526	26.686	10.731	1.00	54.80	C
ATOM	740	O	PHE	A	99	65.886	26.332	9.611	1.00	54.79	O
ATOM	741	CB	PHE	A	99	65.398	29.160	11.005	1.00	53.75	C
ATOM	742	CG	PHE	A	99	66.234	29.457	9.786	1.00	54.18	C
ATOM	743	CD1	PHE	A	99	65.633	29.777	8.573	1.00	53.83	C
ATOM	744	CD2	PHE	A	99	67.624	29.437	9.858	1.00	53.66	C
ATOM	745	CE1	PHE	A	99	66.404	30.075	7.447	1.00	53.53	C
ATOM	746	CE2	PHE	A	99	68.403	29.732	8.743	1.00	53.55	C
ATOM	747	CZ	PHE	A	99	67.792	30.052	7.534	1.00	53.92	C
ATOM	748	N	LYS	A	100	65.927	26.078	11.845	1.00	55.84	N
ATOM	749	CA	LYS	A	100	66.848	24.940	11.809	1.00	57.08	C
ATOM	750	C	LYS	A	100	66.159	23.588	11.633	1.00	58.33	C
ATOM	751	O	LYS	A	100	66.811	22.546	11.722	1.00	58.42	O
ATOM	752	CB	LYS	A	100	67.691	24.893	13.086	1.00	55.72	C
ATOM	753	CG	LYS	A	100	68.611	26.083	13.298	1.00	55.04	C
ATOM	754	CD	LYS	A	100	69.353	25.929	14.616	1.00	53.54	C
ATOM	755	CE	LYS	A	100	70.352	27.045	14.855	1.00	51.61	C
ATOM	756	NZ	LYS	A	100	71.015	26.867	16.172	1.00	50.36	N
ATOM	757	N	ALA	A	101	64.850	23.601	11.395	1.00	59.54	N
ATOM	758	CA	ALA	A	101	64.095	22.363	11.213	1.00	60.39	C
ATOM	759	C	ALA	A	101	64.471	21.672	9.904	1.00	60.69	C
ATOM	760	O	ALA	A	101	65.016	22.298	8.995	1.00	60.89	O
ATOM	761	CB	ALA	A	101	62.596	22.652	11.237	1.00	60.64	C
ATOM	762	N	HIS	A	222	79.198	30.290	16.950	1.00	63.01	N
ATOM	763	CA	HIS	A	222	79.815	30.312	18.273	1.00	62.71	C
ATOM	764	C	HIS	A	222	79.103	31.282	19.214	1.00	60.87	C
ATOM	765	O	HIS	A	222	78.923	30.994	20.399	1.00	60.68	O
ATOM	766	CB	HIS	A	222	81.296	30.695	18.167	1.00	65.58	C
ATOM	767	CG	HIS	A	222	82.137	29.677	17.460	1.00	69.22	C
ATOM	768	ND1	HIS	A	222	82.251	28.373	17.896	1.00	70.94	N
ATOM	769	CD2	HIS	A	222	82.903	29.769	16.346	1.00	70.61	C
ATOM	770	CE1	HIS	A	222	83.049	27.706	17.080	1.00	71.60	C
ATOM	771	NE2	HIS	A	222	83.458	28.530	16.131	1.00	71.43	N
ATOM	772	N	ASN	A	223	78.698	32.432	18.686	1.00	57.42	N
ATOM	773	CA	ASN	A	223	78.012	33.422	19.503	1.00	55.31	C
ATOM	774	C	ASN	A	223	76.518	33.511	19.219	1.00	52.14	C
ATOM	775	O	ASN	A	223	75.888	34.525	19.520	1.00	49.94	O
ATOM	776	CB	ASN	A	223	78.657	34.797	19.317	1.00	57.68	C
ATOM	777	CG	ASN	A	223	79.984	34.925	20.050	1.00	60.74	C
ATOM	778	OD1	ASN	A	223	80.713	35.904	19.870	1.00	64.29	O
ATOM	779	ND2	ASN	A	223	80.299	33.942	20.890	1.00	61.50	N
ATOM	780	N	GLU	A	224	75.948	32.453	18.648	1.00	48.44	N
ATOM	781	CA	GLU	A	224	74.520	32.462	18.351	1.00	46.42	C
ATOM	782	C	GLU	A	224	73.699	32.516	19.631	1.00	43.23	C
ATOM	783	O	GLU	A	224	74.041	31.889	20.631	1.00	42.87	O

TABLE 2

ATOM	784	CB	GLU A 224	74.109	31.226	17.538	1.00	47.17	C
ATOM	785	CG	GLU A 224	74.383	29.892	18.217	1.00	49.19	C
ATOM	786	CD	GLU A 224	73.622	28.735	17.581	1.00	50.18	C
ATOM	787	OE1	GLU A 224	73.410	28.755	16.346	1.00	51.65	O
ATOM	788	OE2	GLU A 224	73.246	27.799	18.318	1.00	49.83	O
ATOM	789	N	LEU A 225	72.615	33.279	19.590	1.00	40.90	N
ATOM	790	CA	LEU A 225	71.733	33.410	20.734	1.00	38.88	C
ATOM	791	C	LEU A 225	70.565	32.457	20.516	1.00	38.25	C
ATOM	792	O	LEU A 225	69.747	32.664	19.621	1.00	36.15	O
ATOM	793	CB	LEU A 225	71.232	34.851	20.848	1.00	37.76	C
ATOM	794	CG	LEU A 225	70.380	35.166	22.077	1.00	37.49	C
ATOM	795	CD1	LEU A 225	71.196	34.932	23.340	1.00	37.19	C
ATOM	796	CD2	LEU A 225	69.898	36.602	22.007	1.00	36.97	C
ATOM	797	N	VAL A 226	70.492	31.416	21.341	1.00	38.35	N
ATOM	798	CA	VAL A 226	69.435	30.415	21.215	1.00	39.11	C
ATOM	799	C	VAL A 226	68.830	29.993	22.551	1.00	40.13	C
ATOM	800	O	VAL A 226	69.337	30.345	23.617	1.00	40.81	O
ATOM	801	CB	VAL A 226	69.969	29.133	20.533	1.00	38.58	C
ATOM	802	CG1	VAL A 226	70.373	29.420	19.094	1.00	35.25	C
ATOM	803	CG2	VAL A 226	71.154	28.595	21.326	1.00	38.53	C
ATOM	804	N	ASP A 227	67.737	29.237	22.475	1.00	40.83	N
ATOM	805	CA	ASP A 227	67.067	28.728	23.661	1.00	41.94	C
ATOM	806	C	ASP A 227	67.601	27.323	23.970	1.00	43.67	C
ATOM	807	O	ASP A 227	68.501	26.828	23.288	1.00	43.28	O
ATOM	808	CB	ASP A 227	65.545	28.679	23.452	1.00	42.33	C
ATOM	809	CG	ASP A 227	65.139	27.889	22.210	1.00	42.71	C
ATOM	810	OD1	ASP A 227	65.753	26.838	21.924	1.00	43.47	O
ATOM	811	OD2	ASP A 227	64.185	28.314	21.525	1.00	40.79	O
ATOM	812	N	SER A 228	67.036	26.681	24.990	1.00	46.46	N
ATOM	813	CA	SER A 228	67.467	25.342	25.395	1.00	48.86	C
ATOM	814	C	SER A 228	67.336	24.291	24.287	1.00	50.18	C
ATOM	815	O	SER A 228	67.953	23.226	24.358	1.00	50.85	O
ATOM	816	CB	SER A 228	66.682	24.891	26.631	1.00	48.09	C
ATOM	817	OG	SER A 228	65.289	24.897	26.378	1.00	49.20	O
ATOM	818	N	GLN A 229	66.537	24.596	23.268	1.00	50.81	N
ATOM	819	CA	GLN A 229	66.331	23.685	22.148	1.00	51.37	C
ATOM	820	C	GLN A 229	67.229	24.081	20.984	1.00	50.93	C
ATOM	821	O	GLN A 229	67.103	23.548	19.878	1.00	49.76	O
ATOM	822	CB	GLN A 229	64.865	23.723	21.699	1.00	53.18	C
ATOM	823	CG	GLN A 229	63.873	23.346	22.784	1.00	55.38	C
ATOM	824	CD	GLN A 229	62.434	23.565	22.353	1.00	58.59	C
ATOM	825	OE1	GLN A 229	61.971	22.979	21.369	1.00	60.22	O
ATOM	826	NE2	GLN A 229	61.716	24.413	23.087	1.00	58.58	N
ATOM	827	N	LYS A 230	68.131	25.026	21.242	1.00	50.37	N
ATOM	828	CA	LYS A 230	69.065	25.515	20.231	1.00	48.94	C
ATOM	829	C	LYS A 230	68.407	26.325	19.116	1.00	46.73	C
ATOM	830	O	LYS A 230	68.991	26.513	18.048	1.00	47.20	O
ATOM	831	CB	LYS A 230	69.856	24.349	19.626	1.00	51.73	C
ATOM	832	CG	LYS A 230	70.992	23.825	20.507	1.00	54.62	C
ATOM	833	CD	LYS A 230	72.073	24.889	20.705	1.00	57.67	C
ATOM	834	CE	LYS A 230	73.357	24.307	21.302	1.00	59.53	C
ATOM	835	NZ	LYS A 230	73.161	23.692	22.653	1.00	59.91	N
ATOM	836	N	ARG A 231	67.195	26.811	19.362	1.00	45.43	N
ATOM	837	CA	ARG A 231	66.494	27.621	18.368	1.00	43.78	C
ATOM	838	C	ARG A 231	66.851	29.087	18.595	1.00	41.98	C
ATOM	839	O	ARG A 231	67.013	29.524	19.735	1.00	40.65	O
ATOM	840	CB	ARG A 231	64.979	27.445	18.495	1.00	45.11	C

TABLE 2

ATOM	841	CG	ARG	A	231	64.494	26.006	18.362	1.00	46.09	C
ATOM	842	CD	ARG	A	231	62.990	25.927	18.557	1.00	47.94	C
ATOM	843	NE	ARG	A	231	62.587	26.465	19.854	1.00	49.46	N
ATOM	844	CZ	ARG	A	231	61.326	26.555	20.273	1.00	52.08	C
ATOM	845	NH1	ARG	A	231	60.328	26.144	19.498	1.00	50.02	N
ATOM	846	NH2	ARG	A	231	61.063	27.058	21.476	1.00	53.40	N
ATOM	847	N	TYR	A	232	66.981	29.841	17.510	1.00	40.54	N
ATOM	848	CA	TYR	A	232	67.312	31.253	17.607	1.00	38.76	C
ATOM	849	C	TYR	A	232	66.284	32.005	18.451	1.00	38.33	C
ATOM	850	O	TYR	A	232	65.086	31.706	18.418	1.00	37.07	O
ATOM	851	CB	TYR	A	232	67.377	31.882	16.217	1.00	39.12	C
ATOM	852	CG	TYR	A	232	68.502	31.363	15.353	1.00	41.29	C
ATOM	853	CD1	TYR	A	232	69.821	31.371	15.809	1.00	41.57	C
ATOM	854	CD2	TYR	A	232	68.253	30.883	14.070	1.00	41.51	C
ATOM	855	CE1	TYR	A	232	70.867	30.915	15.002	1.00	43.44	C
ATOM	856	CE2	TYR	A	232	69.288	30.425	13.257	1.00	44.33	C
ATOM	857	CZ	TYR	A	232	70.591	30.444	13.727	1.00	44.76	C
ATOM	858	OH	TYR	A	232	71.612	30.003	12.913	1.00	47.05	O
ATOM	859	N	LEU	A	233	66.764	32.970	19.228	1.00	36.38	N
ATOM	860	CA	LEU	A	233	65.879	33.775	20.052	1.00	35.39	C
ATOM	861	C	LEU	A	233	65.296	34.876	19.176	1.00	33.69	C
ATOM	862	O	LEU	A	233	65.937	35.338	18.230	1.00	33.90	O
ATOM	863	CB	LEU	A	233	66.650	34.390	21.226	1.00	35.98	C
ATOM	864	CG	LEU	A	233	66.395	33.765	22.602	1.00	39.07	C
ATOM	865	CD1	LEU	A	233	66.503	32.252	22.519	1.00	37.64	C
ATOM	866	CD2	LEU	A	233	67.384	34.325	23.616	1.00	38.75	C
ATOM	867	N	VAL	A	234	64.072	35.279	19.475	1.00	32.47	N
ATOM	868	CA	VAL	A	234	63.433	36.334	18.710	1.00	31.96	C
ATOM	869	C	VAL	A	234	62.465	37.080	19.613	1.00	31.91	C
ATOM	870	O	VAL	A	234	61.883	36.502	20.529	1.00	31.40	O
ATOM	871	CB	VAL	A	234	62.676	35.767	17.476	1.00	31.95	C
ATOM	872	CG1	VAL	A	234	61.402	35.048	17.913	1.00	29.55	C
ATOM	873	CG2	VAL	A	234	62.371	36.888	16.498	1.00	29.80	C
ATOM	874	N	GLY	A	235	62.319	38.375	19.366	1.00	32.16	N
ATOM	875	CA	GLY	A	235	61.416	39.174	20.163	1.00	31.96	C
ATOM	876	C	GLY	A	235	60.308	39.689	19.277	1.00	32.19	C
ATOM	877	O	GLY	A	235	60.396	39.604	18.050	1.00	32.58	O
ATOM	878	N	ALA	A	236	59.259	40.225	19.886	1.00	31.00	N
ATOM	879	CA	ALA	A	236	58.154	40.746	19.109	1.00	31.50	C
ATOM	880	C	ALA	A	236	57.535	41.973	19.766	1.00	30.43	C
ATOM	881	O	ALA	A	236	57.275	41.981	20.965	1.00	32.80	O
ATOM	882	CB	ALA	A	236	57.095	39.653	18.911	1.00	32.43	C
ATOM	883	N	GLY	A	237	57.311	43.013	18.973	1.00	30.90	N
ATOM	884	CA	GLY	A	237	56.710	44.218	19.504	1.00	32.34	C
ATOM	885	C	GLY	A	237	55.206	44.067	19.618	1.00	32.69	C
ATOM	886	O	GLY	A	237	54.595	43.345	18.837	1.00	34.22	O
ATOM	887	N	ILE	A	238	54.607	44.723	20.606	1.00	32.45	N
ATOM	888	CA	ILE	A	238	53.161	44.668	20.774	1.00	32.44	C
ATOM	889	C	ILE	A	238	52.646	46.077	21.074	1.00	32.79	C
ATOM	890	O	ILE	A	238	53.422	46.976	21.400	1.00	32.08	O
ATOM	891	CB	ILE	A	238	52.739	43.709	21.927	1.00	33.39	C
ATOM	892	CG1	ILE	A	238	53.212	44.253	23.278	1.00	34.02	C
ATOM	893	CG2	ILE	A	238	53.309	42.320	21.686	1.00	32.20	C
ATOM	894	CD1	ILE	A	238	52.721	43.433	24.483	1.00	32.19	C
ATOM	895	N	ASN	A	239	51.341	46.276	20.946	1.00	32.14	N
ATOM	896	CA	ASN	A	239	50.768	47.579	21.221	1.00	31.92	C
ATOM	897	C	ASN	A	239	49.769	47.462	22.358	1.00	33.41	C

TABLE 2

ATOM	898	O	ASN	A	239	49.391	46.357	22.759	1.00	32.91	O
ATOM	899	CB	ASN	A	239	50.111	48.161	19.958	1.00	32.71	C
ATOM	900	CG	ASN	A	239	48.978	47.300	19.428	1.00	32.73	C
ATOM	901	OD1	ASN	A	239	47.941	47.162	20.070	1.00	33.18	O
ATOM	902	ND2	ASN	A	239	49.175	46.717	18.249	1.00	31.34	N
ATOM	903	N	THR	A	240	49.351	48.608	22.878	1.00	34.02	N
ATOM	904	CA	THR	A	240	48.414	48.658	23.989	1.00	35.67	C
ATOM	905	C	THR	A	240	46.949	48.476	23.596	1.00	36.91	C
ATOM	906	O	THR	A	240	46.061	48.629	24.435	1.00	35.65	O
ATOM	907	CB	THR	A	240	48.555	49.995	24.739	1.00	34.88	C
ATOM	908	OG1	THR	A	240	48.330	51.074	23.823	1.00	34.88	O
ATOM	909	CG2	THR	A	240	49.952	50.125	25.343	1.00	33.05	C
ATOM	910	N	ARG	A	241	46.691	48.135	22.338	1.00	39.01	N
ATOM	911	CA	ARG	A	241	45.312	47.972	21.889	1.00	43.02	C
ATOM	912	C	ARG	A	241	44.821	46.538	21.708	1.00	42.60	C
ATOM	913	O	ARG	A	241	43.926	46.093	22.429	1.00	41.68	O
ATOM	914	CB	ARG	A	241	45.087	48.752	20.588	1.00	46.62	C
ATOM	915	CG	ARG	A	241	43.702	48.546	19.976	1.00	52.95	C
ATOM	916	CD	ARG	A	241	43.469	49.420	18.740	1.00	57.47	C
ATOM	917	NE	ARG	A	241	42.889	50.725	19.069	1.00	61.95	N
ATOM	918	CZ	ARG	A	241	43.504	51.681	19.763	1.00	63.53	C
ATOM	919	NH1	ARG	A	241	44.738	51.496	20.218	1.00	64.10	N
ATOM	920	NH2	ARG	A	241	42.883	52.831	19.999	1.00	63.47	N
ATOM	921	N	ASP	A	242	45.396	45.820	20.748	1.00	42.26	N
ATOM	922	CA	ASP	A	242	44.974	44.450	20.473	1.00	43.86	C
ATOM	923	C	ASP	A	242	45.832	43.360	21.119	1.00	43.63	C
ATOM	924	O	ASP	A	242	45.930	42.258	20.585	1.00	44.69	O
ATOM	925	CB	ASP	A	242	44.930	44.214	18.957	1.00	43.42	C
ATOM	926	CG	ASP	A	242	46.295	44.361	18.295	1.00	45.14	C
ATOM	927	OD1	ASP	A	242	47.320	44.022	18.931	1.00	44.30	O
ATOM	928	OD2	ASP	A	242	46.344	44.799	17.123	1.00	45.01	O
ATOM	929	N	PHE	A	243	46.433	43.655	22.266	1.00	43.34	N
ATOM	930	CA	PHE	A	243	47.298	42.686	22.939	1.00	43.11	C
ATOM	931	C	PHE	A	243	46.612	41.409	23.434	1.00	43.36	C
ATOM	932	O	PHE	A	243	47.244	40.354	23.504	1.00	43.21	O
ATOM	933	CB	PHE	A	243	48.043	43.368	24.097	1.00	40.53	C
ATOM	934	CG	PHE	A	243	47.147	43.890	25.179	1.00	38.93	C
ATOM	935	CD1	PHE	A	243	46.662	43.042	26.170	1.00	38.45	C
ATOM	936	CD2	PHE	A	243	46.795	45.236	25.216	1.00	38.69	C
ATOM	937	CE1	PHE	A	243	45.842	43.524	27.185	1.00	38.00	C
ATOM	938	CE2	PHE	A	243	45.974	45.731	26.226	1.00	38.21	C
ATOM	939	CZ	PHE	A	243	45.497	44.872	27.215	1.00	38.78	C
ATOM	940	N	ARG	A	244	45.328	41.497	23.772	1.00	43.84	N
ATOM	941	CA	ARG	A	244	44.598	40.325	24.253	1.00	44.76	C
ATOM	942	C	ARG	A	244	44.549	39.225	23.197	1.00	44.01	C
ATOM	943	O	ARG	A	244	44.455	38.047	23.526	1.00	44.85	O
ATOM	944	CB	ARG	A	244	43.176	40.713	24.685	1.00	44.23	C
ATOM	945	CG	ARG	A	244	43.148	41.654	25.880	1.00	43.24	C
ATOM	946	CD	ARG	A	244	41.735	41.931	26.362	1.00	44.43	C
ATOM	947	NE	ARG	A	244	41.721	42.938	27.420	1.00	45.36	N
ATOM	948	CZ	ARG	A	244	41.970	44.231	27.224	1.00	46.55	C
ATOM	949	NH1	ARG	A	244	42.247	44.678	26.003	1.00	44.24	N
ATOM	950	NH2	ARG	A	244	41.953	45.077	28.248	1.00	45.03	N
ATOM	951	N	GLU	A	245	44.614	39.610	21.929	1.00	44.30	N
ATOM	952	CA	GLU	A	245	44.599	38.634	20.849	1.00	45.31	C
ATOM	953	C	GLU	A	245	46.001	38.448	20.275	1.00	44.68	C
ATOM	954	O	GLU	A	245	46.363	37.358	19.826	1.00	44.64	O

TABLE 2

ATOM	955	CB	GLU	A	245	43.640	39.071	19.733	1.00	48.37	C
ATOM	956	CG	GLU	A	245	42.153	38.931	20.084	1.00	53.41	C
ATOM	957	CD	GLU	A	245	41.647	39.993	21.059	1.00	57.52	C
ATOM	958	OE1	GLU	A	245	40.635	39.725	21.746	1.00	59.50	O
ATOM	959	OE2	GLU	A	245	42.239	41.099	21.132	1.00	59.64	O
ATOM	960	N	ARG	A	246	46.794	39.514	20.309	1.00	42.77	N
ATOM	961	CA	ARG	A	246	48.152	39.479	19.771	1.00	41.08	C
ATOM	962	C	ARG	A	246	49.163	38.714	20.629	1.00	39.13	C
ATOM	963	O	ARG	A	246	49.964	37.944	20.111	1.00	37.89	O
ATOM	964	CB	ARG	A	246	48.649	40.907	19.553	1.00	42.28	C
ATOM	965	CG	ARG	A	246	49.936	40.997	18.770	1.00	44.41	C
ATOM	966	CD	ARG	A	246	50.355	42.442	18.584	1.00	46.22	C
ATOM	967	NE	ARG	A	246	50.638	42.723	17.185	1.00	50.24	N
ATOM	968	CZ	ARG	A	246	49.723	43.062	16.287	1.00	48.88	C
ATOM	969	NH1	ARG	A	246	48.454	43.175	16.638	1.00	51.93	N
ATOM	970	NH2	ARG	A	246	50.076	43.269	15.031	1.00	50.28	N
ATOM	971	N	VAL	A	247	49.134	38.928	21.939	1.00	37.97	N
ATOM	972	CA	VAL	A	247	50.075	38.246	22.822	1.00	38.70	C
ATOM	973	C	VAL	A	247	49.977	36.716	22.746	1.00	39.69	C
ATOM	974	O	VAL	A	247	50.980	36.041	22.499	1.00	40.53	O
ATOM	975	CB	VAL	A	247	49.901	38.717	24.285	1.00	36.45	C
ATOM	976	CG1	VAL	A	247	50.735	37.867	25.217	1.00	35.80	C
ATOM	977	CG2	VAL	A	247	50.315	40.184	24.402	1.00	36.49	C
ATOM	978	N	PRO	A	248	48.770	36.148	22.955	1.00	39.79	N
ATOM	979	CA	PRO	A	248	48.615	34.688	22.895	1.00	38.65	C
ATOM	980	C	PRO	A	248	49.149	34.104	21.588	1.00	37.90	C
ATOM	981	O	PRO	A	248	49.773	33.044	21.579	1.00	38.24	O
ATOM	982	CB	PRO	A	248	47.107	34.498	23.050	1.00	40.03	C
ATOM	983	CG	PRO	A	248	46.727	35.633	23.951	1.00	39.42	C
ATOM	984	CD	PRO	A	248	47.499	36.790	23.340	1.00	37.60	C
ATOM	985	N	ALA	A	249	48.905	34.808	20.488	1.00	38.13	N
ATOM	986	CA	ALA	A	249	49.369	34.372	19.178	1.00	38.44	C
ATOM	987	C	ALA	A	249	50.899	34.403	19.100	1.00	40.66	C
ATOM	988	O	ALA	A	249	51.519	33.508	18.505	1.00	40.90	O
ATOM	989	CB	ALA	A	249	48.777	35.257	18.103	1.00	38.28	C
ATOM	990	N	LEU	A	250	51.502	35.433	19.698	1.00	39.69	N
ATOM	991	CA	LEU	A	250	52.956	35.570	19.699	1.00	39.26	C
ATOM	992	C	LEU	A	250	53.585	34.501	20.587	1.00	39.24	C
ATOM	993	O	LEU	A	250	54.600	33.908	20.232	1.00	38.60	O
ATOM	994	CB	LEU	A	250	53.357	36.974	20.176	1.00	39.22	C
ATOM	995	CG	LEU	A	250	53.642	38.057	19.119	1.00	39.75	C
ATOM	996	CD1	LEU	A	250	53.046	37.699	17.772	1.00	37.78	C
ATOM	997	CD2	LEU	A	250	53.099	39.387	19.610	1.00	39.06	C
ATOM	998	N	VAL	A	251	52.974	34.256	21.740	1.00	40.54	N
ATOM	999	CA	VAL	A	251	53.469	33.243	22.665	1.00	42.59	C
ATOM	1000	C	VAL	A	251	53.413	31.878	21.985	1.00	43.82	C
ATOM	1001	O	VAL	A	251	54.406	31.153	21.942	1.00	43.85	O
ATOM	1002	CB	VAL	A	251	52.616	33.201	23.946	1.00	42.12	C
ATOM	1003	CG1	VAL	A	251	53.101	32.088	24.865	1.00	43.50	C
ATOM	1004	CG2	VAL	A	251	52.691	34.543	24.653	1.00	44.13	C
ATOM	1005	N	GLU	A	252	52.243	31.537	21.451	1.00	45.33	N
ATOM	1006	CA	GLU	A	252	52.055	30.268	20.759	1.00	46.43	C
ATOM	1007	C	GLU	A	252	53.068	30.096	19.629	1.00	44.48	C
ATOM	1008	O	GLU	A	252	53.568	28.996	19.398	1.00	44.67	O
ATOM	1009	CB	GLU	A	252	50.634	30.172	20.183	1.00	49.48	C
ATOM	1010	CG	GLU	A	252	49.629	29.457	21.081	1.00	55.40	C
ATOM	1011	CD	GLU	A	252	49.072	30.334	22.188	1.00	57.85	C



TABLE 2

ATOM	1012	OE1	GLU	A	252	47.945	30.858	22.029	1.00	57.96	O
ATOM	1013	OE2	GLU	A	252	49.762	30.500	23.216	1.00	60.59	O
ATOM	1014	N	ALA	A	253	53.363	31.183	18.923	1.00	41.46	N
ATOM	1015	CA	ALA	A	253	54.315	31.135	17.820	1.00	39.92	C
ATOM	1016	C	ALA	A	253	55.748	30.896	18.306	1.00	39.79	C
ATOM	1017	O	ALA	A	253	56.638	30.587	17.509	1.00	39.66	O
ATOM	1018	CB	ALA	A	253	54.239	32.421	17.009	1.00	38.59	C
ATOM	1019	N	GLY	A	254	55.971	31.046	19.609	1.00	38.49	N
ATOM	1020	CA	GLY	A	254	57.297	30.813	20.156	1.00	40.23	C
ATOM	1021	C	GLY	A	254	58.139	32.043	20.472	1.00	39.89	C
ATOM	1022	O	GLY	A	254	59.355	31.936	20.619	1.00	39.63	O
ATOM	1023	N	ALA	A	255	57.506	33.207	20.575	1.00	39.17	N
ATOM	1024	CA	ALA	A	255	58.232	34.432	20.888	1.00	38.09	C
ATOM	1025	C	ALA	A	255	58.933	34.287	22.238	1.00	36.72	C
ATOM	1026	O	ALA	A	255	58.324	33.872	23.223	1.00	35.94	O
ATOM	1027	CB	ALA	A	255	57.276	35.612	20.916	1.00	37.70	C
ATOM	1028	N	ASP	A	256	60.214	34.634	22.283	1.00	35.80	N
ATOM	1029	CA	ASP	A	256	60.977	34.520	23.523	1.00	35.28	C
ATOM	1030	C	ASP	A	256	60.809	35.725	24.437	1.00	33.72	C
ATOM	1031	O	ASP	A	256	60.921	35.610	25.656	1.00	32.72	O
ATOM	1032	CB	ASP	A	256	62.451	34.307	23.199	1.00	34.79	C
ATOM	1033	CG	ASP	A	256	62.682	33.041	22.404	1.00	37.41	C
ATOM	1034	OD1	ASP	A	256	62.584	31.948	23.003	1.00	38.37	O
ATOM	1035	OD2	ASP	A	256	62.944	33.137	21.185	1.00	34.51	O
ATOM	1036	N	VAL	A	257	60.538	36.881	23.845	1.00	32.63	N
ATOM	1037	CA	VAL	A	257	60.354	38.096	24.625	1.00	32.40	C
ATOM	1038	C	VAL	A	257	59.502	39.085	23.845	1.00	31.76	C
ATOM	1039	O	VAL	A	257	59.520	39.100	22.617	1.00	32.06	O
ATOM	1040	CB	VAL	A	257	61.720	38.748	24.986	1.00	29.73	C
ATOM	1041	CG1	VAL	A	257	62.435	39.181	23.730	1.00	30.67	C
ATOM	1042	CG2	VAL	A	257	61.514	39.920	25.924	1.00	29.01	C
ATOM	1043	N	LEU	A	258	58.749	39.899	24.572	1.00	30.18	N
ATOM	1044	CA	LEU	A	258	57.886	40.894	23.957	1.00	31.57	C
ATOM	1045	C	LEU	A	258	58.308	42.286	24.405	1.00	31.09	C
ATOM	1046	O	LEU	A	258	59.036	42.441	25.384	1.00	31.25	O
ATOM	1047	CB	LEU	A	258	56.427	40.665	24.374	1.00	29.78	C
ATOM	1048	CG	LEU	A	258	55.852	39.263	24.175	1.00	31.14	C
ATOM	1049	CD1	LEU	A	258	54.440	39.223	24.729	1.00	33.95	C
ATOM	1050	CD2	LEU	A	258	55.870	38.887	22.696	1.00	30.48	C
ATOM	1051	N	CYS	A	259	57.849	43.298	23.680	1.00	31.62	N
ATOM	1052	CA	CYS	A	259	58.149	44.675	24.042	1.00	31.37	C
ATOM	1053	C	CYS	A	259	57.070	45.613	23.521	1.00	30.31	C
ATOM	1054	O	CYS	A	259	56.798	45.650	22.324	1.00	31.18	O
ATOM	1055	CB	CYS	A	259	59.503	45.114	23.485	1.00	28.99	C
ATOM	1056	SG	CYS	A	259	60.014	46.724	24.132	1.00	29.97	S
ATOM	1057	N	ILE	A	260	56.456	46.362	24.428	1.00	30.30	N
ATOM	1058	CA	ILE	A	260	55.431	47.317	24.042	1.00	31.13	C
ATOM	1059	C	ILE	A	260	56.147	48.408	23.248	1.00	33.06	C
ATOM	1060	O	ILE	A	260	57.157	48.959	23.693	1.00	32.27	O
ATOM	1061	CB	ILE	A	260	54.752	47.921	25.276	1.00	30.72	C
ATOM	1062	CG1	ILE	A	260	54.132	46.796	26.110	1.00	29.75	C
ATOM	1063	CG2	ILE	A	260	53.695	48.946	24.851	1.00	27.83	C
ATOM	1064	CD1	ILE	A	260	53.567	47.256	27.440	1.00	30.89	C
ATOM	1065	N	ASP	A	261	55.620	48.701	22.068	1.00	33.30	N
ATOM	1066	CA	ASP	A	261	56.204	49.682	21.172	1.00	34.73	C
ATOM	1067	C	ASP	A	261	55.482	51.032	21.222	1.00	35.90	C
ATOM	1068	O	ASP	A	261	54.372	51.171	20.706	1.00	37.40	O

TABLE 2

ATOM	1069	CB	ASP A 261	56.183	49.090	19.762	1.00	34.92	C
ATOM	1070	CG	ASP A 261	56.704	50.036	18.712	1.00	36.01	C
ATOM	1071	OD1	ASP A 261	57.519	50.924	19.041	1.00	34.62	O
ATOM	1072	OD2	ASP A 261	56.303	49.871	17.541	1.00	37.89	O
ATOM	1073	N	SER A 262	56.117	52.031	21.831	1.00	35.46	N
ATOM	1074	CA	SER A 262	55.504	53.354	21.946	1.00	35.41	C
ATOM	1075	C	SER A 262	56.538	54.453	22.172	1.00	35.72	C
ATOM	1076	O	SER A 262	57.599	54.203	22.748	1.00	35.63	O
ATOM	1077	CB	SER A 262	54.499	53.339	23.101	1.00	35.49	C
ATOM	1078	OG	SER A 262	53.993	54.629	23.377	1.00	35.23	O
ATOM	1079	N	SER A 263	56.240	55.671	21.722	1.00	34.24	N
ATOM	1080	CA	SER A 263	57.183	56.770	21.922	1.00	35.35	C
ATOM	1081	C	SER A 263	57.056	57.337	23.334	1.00	34.38	C
ATOM	1082	O	SER A 263	58.021	57.862	23.886	1.00	36.61	O
ATOM	1083	CB	SER A 263	56.982	57.876	20.873	1.00	35.88	C
ATOM	1084	OG	SER A 263	55.638	58.326	20.822	1.00	39.99	O
ATOM	1085	N	ASP A 264	55.872	57.224	23.925	1.00	31.64	N
ATOM	1086	CA	ASP A 264	55.664	57.707	25.289	1.00	30.91	C
ATOM	1087	C	ASP A 264	55.128	56.564	26.155	1.00	30.07	C
ATOM	1088	O	ASP A 264	53.917	56.353	26.247	1.00	29.83	O
ATOM	1089	CB	ASP A 264	54.692	58.898	25.296	1.00	29.57	C
ATOM	1090	CG	ASP A 264	54.281	59.325	26.706	1.00	29.79	C
ATOM	1091	OD1	ASP A 264	54.945	58.947	27.696	1.00	27.03	O
ATOM	1092	OD2	ASP A 264	53.283	60.057	26.824	1.00	29.07	O
ATOM	1093	N	GLY A 265	56.042	55.838	26.792	1.00	29.18	N
ATOM	1094	CA	GLY A 265	55.659	54.712	27.627	1.00	28.22	C
ATOM	1095	C	GLY A 265	55.158	55.050	29.018	1.00	28.37	C
ATOM	1096	O	GLY A 265	54.689	54.169	29.736	1.00	28.80	O
ATOM	1097	N	PHE A 266	55.258	56.317	29.407	1.00	27.17	N
ATOM	1098	CA	PHE A 266	54.798	56.752	30.721	1.00	28.12	C
ATOM	1099	C	PHE A 266	53.275	56.847	30.584	1.00	29.95	C
ATOM	1100	O	PHE A 266	52.699	57.932	30.598	1.00	29.08	O
ATOM	1101	CB	PHE A 266	55.415	58.117	31.048	1.00	27.00	C
ATOM	1102	CG	PHE A 266	55.483	58.432	32.522	1.00	28.08	C
ATOM	1103	CD1	PHE A 266	54.761	57.684	33.456	1.00	26.54	C
ATOM	1104	CD2	PHE A 266	56.259	59.502	32.973	1.00	25.82	C
ATOM	1105	CE1	PHE A 266	54.810	57.995	34.817	1.00	26.74	C
ATOM	1106	CE2	PHE A 266	56.317	59.827	34.328	1.00	24.90	C
ATOM	1107	CZ	PHE A 266	55.593	59.074	35.257	1.00	27.12	C
ATOM	1108	N	SER A 267	52.636	55.684	30.453	1.00	31.46	N
ATOM	1109	CA	SER A 267	51.194	55.596	30.233	1.00	31.95	C
ATOM	1110	C	SER A 267	50.476	54.513	31.029	1.00	32.94	C
ATOM	1111	O	SER A 267	50.989	53.405	31.218	1.00	32.01	O
ATOM	1112	CB	SER A 267	50.938	55.343	28.746	1.00	31.54	C
ATOM	1113	OG	SER A 267	49.558	55.219	28.462	1.00	34.95	O
ATOM	1114	N	GLU A 268	49.266	54.833	31.466	1.00	33.57	N
ATOM	1115	CA	GLU A 268	48.460	53.887	32.214	1.00	35.39	C
ATOM	1116	C	GLU A 268	48.162	52.711	31.284	1.00	35.05	C
ATOM	1117	O	GLU A 268	47.945	51.589	31.736	1.00	35.30	O
ATOM	1118	CB	GLU A 268	47.159	54.551	32.677	1.00	36.81	C
ATOM	1119	CG	GLU A 268	46.306	53.672	33.576	1.00	41.82	C
ATOM	1120	CD	GLU A 268	45.047	54.369	34.076	1.00	45.55	C
ATOM	1121	OE1	GLU A 268	44.238	53.691	34.753	1.00	47.73	O
ATOM	1122	OE2	GLU A 268	44.864	55.582	33.801	1.00	43.72	O
ATOM	1123	N	TRP A 269	48.166	52.973	29.980	1.00	33.62	N
ATOM	1124	CA	TRP A 269	47.907	51.925	29.002	1.00	35.48	C
ATOM	1125	C	TRP A 269	48.958	50.813	29.063	1.00	34.72	C

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ATOM	1126	O	TRP	A	269	48.632	49.637	28.873	1.00	35.26	O
ATOM	1127	CB	TRP	A	269	47.858	52.502	27.584	1.00	36.38	C
ATOM	1128	CG	TRP	A	269	46.659	53.368	27.322	1.00	41.33	C
ATOM	1129	CD1	TRP	A	269	46.656	54.711	27.068	1.00	40.88	C
ATOM	1130	CD2	TRP	A	269	45.289	52.948	27.272	1.00	42.34	C
ATOM	1131	NE1	TRP	A	269	45.372	55.150	26.861	1.00	42.36	N
ATOM	1132	CE2	TRP	A	269	44.513	54.090	26.981	1.00	42.40	C
ATOM	1133	CE3	TRP	A	269	44.642	51.715	27.445	1.00	43.39	C
ATOM	1134	CZ2	TRP	A	269	43.122	54.039	26.858	1.00	44.45	C
ATOM	1135	CZ3	TRP	A	269	43.258	51.663	27.322	1.00	44.28	C
ATOM	1136	CH2	TRP	A	269	42.514	52.821	27.031	1.00	44.95	C
ATOM	1137	N	GLN	A	270	50.216	51.176	29.313	1.00	32.85	N
ATOM	1138	CA	GLN	A	270	51.274	50.171	29.406	1.00	32.10	C
ATOM	1139	C	GLN	A	270	51.134	49.400	30.717	1.00	31.09	C
ATOM	1140	O	GLN	A	270	51.403	48.205	30.770	1.00	30.10	O
ATOM	1141	CB	GLN	A	270	52.669	50.816	29.308	1.00	30.58	C
ATOM	1142	CG	GLN	A	270	52.897	51.572	28.000	1.00	29.81	C
ATOM	1143	CD	GLN	A	270	54.275	51.346	27.394	1.00	29.50	C
ATOM	1144	OE1	GLN	A	270	55.172	50.791	28.031	1.00	28.16	O
ATOM	1145	NE2	GLN	A	270	54.448	51.789	26.156	1.00	26.58	N
ATOM	1146	N	LYS	A	271	50.712	50.085	31.775	1.00	32.98	N
ATOM	1147	CA	LYS	A	271	50.518	49.416	33.057	1.00	35.22	C
ATOM	1148	C	LYS	A	271	49.432	48.347	32.881	1.00	34.93	C
ATOM	1149	O	LYS	A	271	49.566	47.224	33.365	1.00	33.86	O
ATOM	1150	CB	LYS	A	271	50.097	50.419	34.137	1.00	36.36	C
ATOM	1151	CG	LYS	A	271	49.780	49.767	35.481	1.00	39.94	C
ATOM	1152	CD	LYS	A	271	49.633	50.794	36.608	1.00	42.24	C
ATOM	1153	CE	LYS	A	271	49.393	50.095	37.951	1.00	45.21	C
ATOM	1154	NZ	LYS	A	271	49.405	51.022	39.132	1.00	47.32	N
ATOM	1155	N	ILE	A	272	48.373	48.708	32.159	1.00	34.90	N
ATOM	1156	CA	ILE	A	272	47.257	47.807	31.897	1.00	35.34	C
ATOM	1157	C	ILE	A	272	47.698	46.602	31.071	1.00	35.48	C
ATOM	1158	O	ILE	A	272	47.347	45.466	31.387	1.00	36.14	O
ATOM	1159	CB	ILE	A	272	46.109	48.545	31.157	1.00	35.04	C
ATOM	1160	CG1	ILE	A	272	45.467	49.565	32.101	1.00	35.36	C
ATOM	1161	CG2	ILE	A	272	45.073	47.539	30.644	1.00	34.61	C
ATOM	1162	CD1	ILE	A	272	44.485	50.509	31.431	1.00	33.49	C
ATOM	1163	N	THR	A	273	48.469	46.851	30.016	1.00	34.92	N
ATOM	1164	CA	THR	A	273	48.951	45.777	29.156	1.00	34.08	C
ATOM	1165	C	THR	A	273	49.844	44.791	29.918	1.00	34.99	C
ATOM	1166	O	THR	A	273	49.675	43.578	29.803	1.00	36.08	O
ATOM	1167	CB	THR	A	273	49.741	46.340	27.958	1.00	34.19	C
ATOM	1168	OG1	THR	A	273	48.888	47.192	27.188	1.00	35.97	O
ATOM	1169	CG2	THR	A	273	50.248	45.216	27.069	1.00	32.81	C
ATOM	1170	N	ILE	A	274	50.797	45.305	30.687	1.00	34.29	N
ATOM	1171	CA	ILE	A	274	51.692	44.433	31.443	1.00	34.33	C
ATOM	1172	C	ILE	A	274	50.900	43.660	32.493	1.00	35.70	C
ATOM	1173	O	ILE	A	274	51.185	42.495	32.769	1.00	34.67	O
ATOM	1174	CB	ILE	A	274	52.793	45.235	32.153	1.00	32.65	C
ATOM	1175	CG1	ILE	A	274	53.699	45.902	31.113	1.00	32.10	C
ATOM	1176	CG2	ILE	A	274	53.597	44.313	33.082	1.00	31.88	C
ATOM	1177	CD1	ILE	A	274	54.700	46.877	31.704	1.00	30.38	C
ATOM	1178	N	GLY	A	275	49.907	44.324	33.076	1.00	36.56	N
ATOM	1179	CA	GLY	A	275	49.082	43.684	34.085	1.00	37.75	C
ATOM	1180	C	GLY	A	275	48.326	42.496	33.520	1.00	37.44	C
ATOM	1181	O	GLY	A	275	48.230	41.456	34.159	1.00	38.90	O
ATOM	1182	N	TRP	A	276	47.791	42.649	32.316	1.00	36.76	N

TABLE 2

ATOM	1183	CA	TRP	A	276	47.040	41.582	31.677	1.00	37.78	C
ATOM	1184	C	TRP	A	276	47.952	40.391	31.416	1.00	39.15	C
ATOM	1185	O	TRP	A	276	47.535	39.238	31.545	1.00	38.18	O
ATOM	1186	CB	TRP	A	276	46.452	42.069	30.355	1.00	37.54	C
ATOM	1187	CG	TRP	A	276	45.547	41.082	29.704	1.00	38.13	C
ATOM	1188	CD1	TRP	A	276	44.213	40.906	29.948	1.00	38.02	C
ATOM	1189	CD2	TRP	A	276	45.905	40.117	28.706	1.00	38.93	C
ATOM	1190	NE1	TRP	A	276	43.717	39.891	29.158	1.00	38.58	N
ATOM	1191	CE2	TRP	A	276	44.734	39.390	28.387	1.00	39.11	C
ATOM	1192	CE3	TRP	A	276	47.102	39.795	28.049	1.00	39.30	C
ATOM	1193	CZ2	TRP	A	276	44.724	38.360	27.439	1.00	39.42	C
ATOM	1194	CZ3	TRP	A	276	47.093	38.768	27.105	1.00	40.69	C
ATOM	1195	CH2	TRP	A	276	45.908	38.064	26.809	1.00	40.36	C
ATOM	1196	N	ILE	A	277	49.199	40.675	31.045	1.00	38.34	N
ATOM	1197	CA	ILE	A	277	50.164	39.621	30.765	1.00	38.49	C
ATOM	1198	C	ILE	A	277	50.535	38.850	32.033	1.00	40.03	C
ATOM	1199	O	ILE	A	277	50.704	37.634	31.995	1.00	39.95	O
ATOM	1200	CB	ILE	A	277	51.444	40.197	30.113	1.00	38.18	C
ATOM	1201	CG1	ILE	A	277	51.112	40.752	28.725	1.00	37.35	C
ATOM	1202	CG2	ILE	A	277	52.520	39.121	30.016	1.00	36.41	C
ATOM	1203	CD1	ILE	A	277	52.274	41.440	28.036	1.00	35.39	C
ATOM	1204	N	ARG	A	278	50.656	39.556	33.152	1.00	41.65	N
ATOM	1205	CA	ARG	A	278	51.001	38.921	34.421	1.00	44.16	C
ATOM	1206	C	ARG	A	278	49.871	38.043	34.950	1.00	46.24	C
ATOM	1207	O	ARG	A	278	50.114	36.945	35.439	1.00	47.52	O
ATOM	1208	CB	ARG	A	278	51.350	39.977	35.472	1.00	42.76	C
ATOM	1209	CG	ARG	A	278	52.659	40.688	35.221	1.00	41.00	C
ATOM	1210	CD	ARG	A	278	53.853	39.767	35.416	1.00	40.34	C
ATOM	1211	NE	ARG	A	278	55.085	40.438	35.003	1.00	39.80	N
ATOM	1212	CZ	ARG	A	278	55.819	40.075	33.957	1.00	37.53	C
ATOM	1213	NH1	ARG	A	278	55.460	39.035	33.220	1.00	36.20	N
ATOM	1214	NH2	ARG	A	278	56.895	40.777	33.628	1.00	37.01	N
ATOM	1215	N	GLU	A	279	48.640	38.535	34.853	1.00	48.36	N
ATOM	1216	CA	GLU	A	279	47.471	37.794	35.320	1.00	50.94	C
ATOM	1217	C	GLU	A	279	47.248	36.513	34.512	1.00	50.49	C
ATOM	1218	O	GLU	A	279	46.799	35.500	35.045	1.00	50.81	O
ATOM	1219	CB	GLU	A	279	46.222	38.681	35.225	1.00	54.09	C
ATOM	1220	CG	GLU	A	279	44.889	37.951	35.431	1.00	60.56	C
ATOM	1221	CD	GLU	A	279	44.637	37.514	36.874	1.00	64.23	C
ATOM	1222	OE1	GLU	A	279	43.642	36.788	37.106	1.00	65.99	O
ATOM	1223	OE2	GLU	A	279	45.419	37.897	37.777	1.00	66.30	O
ATOM	1224	N	LYS	A	280	47.586	36.567	33.230	1.00	49.08	N
ATOM	1225	CA	LYS	A	280	47.399	35.444	32.323	1.00	48.34	C
ATOM	1226	C	LYS	A	280	48.596	34.489	32.246	1.00	47.43	C
ATOM	1227	O	LYS	A	280	48.423	33.286	32.061	1.00	47.48	O
ATOM	1228	CB	LYS	A	280	47.084	36.000	30.928	1.00	50.57	C
ATOM	1229	CG	LYS	A	280	46.280	35.093	30.003	1.00	53.00	C
ATOM	1230	CD	LYS	A	280	47.125	33.994	29.392	1.00	55.48	C
ATOM	1231	CE	LYS	A	280	46.372	33.274	28.270	1.00	56.67	C
ATOM	1232	NZ	LYS	A	280	45.161	32.558	28.763	1.00	57.35	N
ATOM	1233	N	TYR	A	281	49.805	35.019	32.403	1.00	45.34	N
ATOM	1234	CA	TYR	A	281	51.012	34.208	32.297	1.00	41.45	C
ATOM	1235	C	TYR	A	281	51.987	34.331	33.457	1.00	40.66	C
ATOM	1236	O	TYR	A	281	53.025	33.672	33.457	1.00	40.87	O
ATOM	1237	CB	TYR	A	281	51.773	34.580	31.028	1.00	40.75	C
ATOM	1238	CG	TYR	A	281	50.998	34.455	29.742	1.00	40.09	C
ATOM	1239	CD1	TYR	A	281	50.798	33.211	29.144	1.00	40.34	C

TABLE 2

ATOM	1240	CD2	TYR	A	281	50.507	35.587	29.091	1.00	39.82	C
ATOM	1241	CE1	TYR	A	281	50.139	33.099	27.928	1.00	39.98	C
ATOM	1242	CE2	TYR	A	281	49.841	35.484	27.877	1.00	40.22	C
ATOM	1243	CZ	TYR	A	281	49.665	34.237	27.300	1.00	40.45	C
ATOM	1244	OH	TYR	A	281	49.032	34.127	26.089	1.00	43.40	O
ATOM	1245	N	GLY	A	282	51.679	35.165	34.440	1.00	39.75	N
ATOM	1246	CA	GLY	A	282	52.617	35.333	35.533	1.00	40.40	C
ATOM	1247	C	GLY	A	282	53.931	35.851	34.961	1.00	41.42	C
ATOM	1248	O	GLY	A	282	53.929	36.614	33.991	1.00	38.40	O
ATOM	1249	N	ASP	A	283	55.053	35.433	35.541	1.00	43.07	N
ATOM	1250	CA	ASP	A	283	56.369	35.863	35.074	1.00	45.04	C
ATOM	1251	C	ASP	A	283	56.955	34.932	34.008	1.00	44.74	C
ATOM	1252	O	ASP	A	283	58.155	34.938	33.768	1.00	45.50	O
ATOM	1253	CB	ASP	A	283	57.333	35.961	36.262	1.00	47.26	C
ATOM	1254	CG	ASP	A	283	56.936	37.049	37.253	1.00	51.59	C
ATOM	1255	OD1	ASP	A	283	56.921	38.243	36.865	1.00	52.49	O
ATOM	1256	OD2	ASP	A	283	56.639	36.713	38.424	1.00	53.68	O
ATOM	1257	N	LYS	A	284	56.103	34.143	33.363	1.00	45.94	N
ATOM	1258	CA	LYS	A	284	56.542	33.197	32.334	1.00	46.43	C
ATOM	1259	C	LYS	A	284	56.751	33.889	30.988	1.00	44.34	C
ATOM	1260	O	LYS	A	284	57.530	33.432	30.152	1.00	45.10	O
ATOM	1261	CB	LYS	A	284	55.510	32.067	32.182	1.00	50.03	C
ATOM	1262	CG	LYS	A	284	55.898	30.981	31.181	1.00	54.57	C
ATOM	1263	CD	LYS	A	284	54.819	29.892	31.055	1.00	57.10	C
ATOM	1264	CE	LYS	A	284	53.656	30.317	30.157	1.00	58.56	C
ATOM	1265	NZ	LYS	A	284	54.064	30.449	28.717	1.00	57.77	N
ATOM	1266	N	VAL	A	285	56.036	34.984	30.775	1.00	41.89	N
ATOM	1267	CA	VAL	A	285	56.163	35.741	29.539	1.00	38.65	C
ATOM	1268	C	VAL	A	285	56.865	37.052	29.870	1.00	37.26	C
ATOM	1269	O	VAL	A	285	56.445	37.785	30.768	1.00	36.50	O
ATOM	1270	CB	VAL	A	285	54.784	36.024	28.918	1.00	38.41	C
ATOM	1271	CG1	VAL	A	285	54.935	36.904	27.681	1.00	36.80	C
ATOM	1272	CG2	VAL	A	285	54.113	34.710	28.552	1.00	37.51	C
ATOM	1273	N	LYS	A	286	57.947	37.332	29.151	1.00	35.95	N
ATOM	1274	CA	LYS	A	286	58.724	38.542	29.382	1.00	34.21	C
ATOM	1275	C	LYS	A	286	58.260	39.677	28.485	1.00	32.46	C
ATOM	1276	O	LYS	A	286	58.006	39.482	27.296	1.00	32.56	O
ATOM	1277	CB	LYS	A	286	60.215	38.262	29.151	1.00	34.13	C
ATOM	1278	CG	LYS	A	286	60.755	37.082	29.955	1.00	34.78	C
ATOM	1279	CD	LYS	A	286	60.443	37.214	31.439	1.00	33.84	C
ATOM	1280	CE	LYS	A	286	61.080	36.077	32.238	1.00	33.85	C
ATOM	1281	NZ	LYS	A	286	60.846	36.204	33.710	1.00	34.78	N
ATOM	1282	N	VAL	A	287	58.154	40.867	29.062	1.00	30.53	N
ATOM	1283	CA	VAL	A	287	57.702	42.028	28.311	1.00	29.76	C
ATOM	1284	C	VAL	A	287	58.419	43.317	28.697	1.00	28.61	C
ATOM	1285	O	VAL	A	287	58.390	43.744	29.856	1.00	29.71	O
ATOM	1286	CB	VAL	A	287	56.160	42.221	28.472	1.00	28.44	C
ATOM	1287	CG1	VAL	A	287	55.785	42.274	29.938	1.00	29.00	C
ATOM	1288	CG2	VAL	A	287	55.707	43.487	27.769	1.00	28.47	C
ATOM	1289	N	GLY	A	288	59.078	43.920	27.716	1.00	29.14	N
ATOM	1290	CA	GLY	A	288	59.766	45.177	27.941	1.00	28.04	C
ATOM	1291	C	GLY	A	288	58.759	46.288	27.721	1.00	28.71	C
ATOM	1292	O	GLY	A	288	57.760	46.089	27.023	1.00	29.59	O
ATOM	1293	N	ALA	A	289	59.007	47.454	28.310	1.00	28.36	N
ATOM	1294	CA	ALA	A	289	58.090	48.585	28.174	1.00	28.55	C
ATOM	1295	C	ALA	A	289	58.855	49.883	27.902	1.00	29.25	C
ATOM	1296	O	ALA	A	289	60.075	49.921	28.034	1.00	30.12	O

TABLE 2

ATOM	1297	CB	ALA	A	289	57.242	48.720	29.444	1.00	26.88	C
ATOM	1298	N	GLY	A	290	58.136	50.938	27.525	1.00	28.43	N
ATOM	1299	CA	GLY	A	290	58.779	52.209	27.232	1.00	28.28	C
ATOM	1300	C	GLY	A	290	58.137	52.867	26.021	1.00	29.46	C
ATOM	1301	O	GLY	A	290	57.142	52.357	25.512	1.00	29.19	O
ATOM	1302	N	ASN	A	291	58.700	53.969	25.523	1.00	28.11	N
ATOM	1303	CA	ASN	A	291	59.918	54.586	26.053	1.00	27.63	C
ATOM	1304	C	ASN	A	291	59.689	55.673	27.101	1.00	27.03	C
ATOM	1305	O	ASN	A	291	58.656	56.336	27.113	1.00	26.50	O
ATOM	1306	CB	ASN	A	291	60.723	55.200	24.902	1.00	24.57	C
ATOM	1307	CG	ASN	A	291	61.251	54.163	23.946	1.00	27.24	C
ATOM	1308	OD1	ASN	A	291	60.850	52.994	23.990	1.00	28.22	O
ATOM	1309	ND2	ASN	A	291	62.157	54.577	23.069	1.00	24.45	N
ATOM	1310	N	ILE	A	292	60.676	55.848	27.974	1.00	25.83	N
ATOM	1311	CA	ILE	A	292	60.634	56.884	28.996	1.00	26.30	C
ATOM	1312	C	ILE	A	292	62.000	57.576	29.002	1.00	26.52	C
ATOM	1313	O	ILE	A	292	62.943	57.082	28.376	1.00	27.26	O
ATOM	1314	CB	ILE	A	292	60.286	56.304	30.399	1.00	26.90	C
ATOM	1315	CG1	ILE	A	292	61.132	55.066	30.705	1.00	27.05	C
ATOM	1316	CG2	ILE	A	292	58.801	55.967	30.458	1.00	26.39	C
ATOM	1317	CD1	ILE	A	292	62.564	55.368	31.104	1.00	28.87	C
ATOM	1318	N	VAL	A	293	62.115	58.707	29.695	1.00	26.68	N
ATOM	1319	CA	VAL	A	293	63.376	59.443	29.719	1.00	26.19	C
ATOM	1320	C	VAL	A	293	63.856	59.935	31.080	1.00	26.51	C
ATOM	1321	O	VAL	A	293	64.876	60.619	31.161	1.00	27.91	O
ATOM	1322	CB	VAL	A	293	63.323	60.668	28.776	1.00	26.56	C
ATOM	1323	CG1	VAL	A	293	63.327	60.216	27.331	1.00	24.86	C
ATOM	1324	CG2	VAL	A	293	62.079	61.493	29.068	1.00	25.40	C
ATOM	1325	N	ASP	A	294	63.127	59.618	32.143	1.00	26.19	N
ATOM	1326	CA	ASP	A	294	63.547	60.039	33.477	1.00	27.16	C
ATOM	1327	C	ASP	A	294	63.233	58.988	34.535	1.00	26.65	C
ATOM	1328	O	ASP	A	294	62.595	57.980	34.245	1.00	27.20	O
ATOM	1329	CB	ASP	A	294	62.909	61.388	33.860	1.00	26.43	C
ATOM	1330	CG	ASP	A	294	61.385	61.347	33.903	1.00	29.29	C
ATOM	1331	OD1	ASP	A	294	60.770	60.309	33.581	1.00	29.96	O
ATOM	1332	OD2	ASP	A	294	60.791	62.383	34.262	1.00	31.71	O
ATOM	1333	N	GLY	A	295	63.693	59.232	35.757	1.00	27.62	N
ATOM	1334	CA	GLY	A	295	63.462	58.303	36.846	1.00	29.92	C
ATOM	1335	C	GLY	A	295	62.004	57.997	37.127	1.00	30.82	C
ATOM	1336	O	GLY	A	295	61.661	56.861	37.445	1.00	30.01	O
ATOM	1337	N	GLU	A	296	61.146	59.009	37.025	1.00	32.13	N
ATOM	1338	CA	GLU	A	296	59.713	58.831	37.265	1.00	31.92	C
ATOM	1339	C	GLU	A	296	59.111	57.859	36.263	1.00	29.81	C
ATOM	1340	O	GLU	A	296	58.331	56.989	36.631	1.00	30.09	O
ATOM	1341	CB	GLU	A	296	58.977	60.169	37.157	1.00	35.45	C
ATOM	1342	CG	GLU	A	296	58.989	61.006	38.413	1.00	42.92	C
ATOM	1343	CD	GLU	A	296	58.284	62.338	38.215	1.00	48.68	C
ATOM	1344	OE1	GLU	A	296	57.151	62.350	37.669	1.00	50.17	O
ATOM	1345	OE2	GLU	A	296	58.865	63.375	38.609	1.00	51.29	O
ATOM	1346	N	GLY	A	297	59.471	58.024	34.994	1.00	29.22	N
ATOM	1347	CA	GLY	A	297	58.961	57.146	33.954	1.00	29.30	C
ATOM	1348	C	GLY	A	297	59.453	55.721	34.150	1.00	28.85	C
ATOM	1349	O	GLY	A	297	58.703	54.764	33.950	1.00	30.00	O
ATOM	1350	N	PHE	A	298	60.721	55.585	34.529	1.00	27.55	N
ATOM	1351	CA	PHE	A	298	61.325	54.276	34.783	1.00	28.20	C
ATOM	1352	C	PHE	A	298	60.572	53.592	35.921	1.00	28.81	C
ATOM	1353	O	PHE	A	298	60.127	52.453	35.797	1.00	29.70	O

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ATOM	1354	CB	PHE	A	298	62.793	54.432	35.205	1.00	26.54	C
ATOM	1355	CG	PHE	A	298	63.403	53.164	35.747	1.00	27.42	C
ATOM	1356	CD1	PHE	A	298	63.930	52.206	34.890	1.00	25.96	C
ATOM	1357	CD2	PHE	A	298	63.380	52.895	37.112	1.00	28.67	C
ATOM	1358	CE1	PHE	A	298	64.419	50.995	35.381	1.00	27.00	C
ATOM	1359	CE2	PHE	A	298	63.865	51.687	37.615	1.00	29.28	C
ATOM	1360	CZ	PHE	A	298	64.385	50.732	36.745	1.00	26.48	C
ATOM	1361	N	ARG	A	299	60.460	54.319	37.030	1.00	29.81	N
ATOM	1362	CA	ARG	A	299	59.801	53.868	38.252	1.00	31.20	C
ATOM	1363	C	ARG	A	299	58.372	53.388	38.000	1.00	31.34	C
ATOM	1364	O	ARG	A	299	57.948	52.355	38.529	1.00	30.36	O
ATOM	1365	CB	ARG	A	299	59.811	55.020	39.257	1.00	33.79	C
ATOM	1366	CG	ARG	A	299	58.887	54.867	40.443	1.00	39.24	C
ATOM	1367	CD	ARG	A	299	59.563	54.163	41.591	1.00	43.20	C
ATOM	1368	NE	ARG	A	299	60.787	54.835	42.029	1.00	46.01	N
ATOM	1369	CZ	ARG	A	299	61.578	54.359	42.989	1.00	46.27	C
ATOM	1370	NH1	ARG	A	299	61.261	53.226	43.597	1.00	46.49	N
ATOM	1371	NH2	ARG	A	299	62.691	54.996	43.329	1.00	46.82	N
ATOM	1372	N	TYR	A	300	57.630	54.135	37.192	1.00	29.36	N
ATOM	1373	CA	TYR	A	300	56.263	53.752	36.886	1.00	30.10	C
ATOM	1374	C	TYR	A	300	56.209	52.406	36.160	1.00	29.41	C
ATOM	1375	O	TYR	A	300	55.416	51.538	36.510	1.00	29.12	O
ATOM	1376	CB	TYR	A	300	55.584	54.813	36.025	1.00	28.91	C
ATOM	1377	CG	TYR	A	300	54.123	54.518	35.770	1.00	28.90	C
ATOM	1378	CD1	TYR	A	300	53.152	54.795	36.737	1.00	27.98	C
ATOM	1379	CD2	TYR	A	300	53.712	53.960	34.562	1.00	27.83	C
ATOM	1380	CE1	TYR	A	300	51.799	54.526	36.497	1.00	28.93	C
ATOM	1381	CE2	TYR	A	300	52.368	53.687	34.314	1.00	29.78	C
ATOM	1382	CZ	TYR	A	300	51.419	53.974	35.284	1.00	28.36	C
ATOM	1383	OH	TYR	A	300	50.098	53.722	35.019	1.00	28.95	O
ATOM	1384	N	LEU	A	301	57.047	52.230	35.145	1.00	29.18	N
ATOM	1385	CA	LEU	A	301	57.037	50.970	34.416	1.00	29.02	C
ATOM	1386	C	LEU	A	301	57.645	49.845	35.257	1.00	29.33	C
ATOM	1387	O	LEU	A	301	57.286	48.685	35.098	1.00	30.06	O
ATOM	1388	CB	LEU	A	301	57.768	51.119	33.079	1.00	25.76	C
ATOM	1389	CG	LEU	A	301	57.063	52.069	32.093	1.00	26.66	C
ATOM	1390	CD1	LEU	A	301	57.839	52.143	30.770	1.00	20.87	C
ATOM	1391	CD2	LEU	A	301	55.631	51.577	31.848	1.00	24.96	C
ATOM	1392	N	ALA	A	302	58.551	50.192	36.163	1.00	29.71	N
ATOM	1393	CA	ALA	A	302	59.165	49.184	37.019	1.00	31.15	C
ATOM	1394	C	ALA	A	302	58.093	48.588	37.946	1.00	31.17	C
ATOM	1395	O	ALA	A	302	57.913	47.371	38.003	1.00	31.11	O
ATOM	1396	CB	ALA	A	302	60.300	49.804	37.835	1.00	27.53	C
ATOM	1397	N	ASP	A	303	57.381	49.455	38.660	1.00	31.61	N
ATOM	1398	CA	ASP	A	303	56.327	49.016	39.565	1.00	32.39	C
ATOM	1399	C	ASP	A	303	55.221	48.296	38.811	1.00	32.86	C
ATOM	1400	O	ASP	A	303	54.541	47.442	39.381	1.00	33.19	O
ATOM	1401	CB	ASP	A	303	55.723	50.201	40.328	1.00	33.54	C
ATOM	1402	CG	ASP	A	303	56.701	50.831	41.301	1.00	36.75	C
ATOM	1403	OD1	ASP	A	303	57.613	50.123	41.785	1.00	37.27	O
ATOM	1404	OD2	ASP	A	303	56.546	52.033	41.601	1.00	39.52	O
ATOM	1405	N	ALA	A	304	55.034	48.649	37.540	1.00	31.74	N
ATOM	1406	CA	ALA	A	304	54.010	48.017	36.708	1.00	31.41	C
ATOM	1407	C	ALA	A	304	54.434	46.596	36.310	1.00	31.41	C
ATOM	1408	O	ALA	A	304	53.621	45.813	35.818	1.00	30.05	O
ATOM	1409	CB	ALA	A	304	53.741	48.858	35.460	1.00	30.00	C
ATOM	1410	N	GLY	A	305	55.711	46.272	36.505	1.00	31.95	N

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ATOM	1411	CA	GLY A 305	56.179	44.929	36.195	1.00	31.25	C
ATOM	1412	C	GLY A 305	57.000	44.673	34.944	1.00	32.68	C
ATOM	1413	O	GLY A 305	57.279	43.513	34.620	1.00	33.06	O
ATOM	1414	N	ALA A 306	57.397	45.727	34.236	1.00	31.70	N
ATOM	1415	CA	ALA A 306	58.192	45.560	33.018	1.00	31.42	C
ATOM	1416	C	ALA A 306	59.463	44.744	33.294	1.00	30.89	C
ATOM	1417	O	ALA A 306	60.067	44.875	34.358	1.00	30.03	O
ATOM	1418	CB	ALA A 306	58.564	46.934	32.450	1.00	30.33	C
ATOM	1419	N	ASP A 307	59.864	43.911	32.334	1.00	30.79	N
ATOM	1420	CA	ASP A 307	61.070	43.085	32.472	1.00	30.22	C
ATOM	1421	C	ASP A 307	62.337	43.837	32.044	1.00	29.80	C
ATOM	1422	O	ASP A 307	63.449	43.468	32.407	1.00	29.77	O
ATOM	1423	CB	ASP A 307	60.908	41.790	31.673	1.00	29.98	C
ATOM	1424	CG	ASP A 307	59.931	40.835	32.328	1.00	31.85	C
ATOM	1425	OD1	ASP A 307	60.267	40.310	33.407	1.00	30.41	O
ATOM	1426	OD2	ASP A 307	58.826	40.626	31.783	1.00	32.28	O
ATOM	1427	N	PHE A 308	62.153	44.876	31.242	1.00	28.99	N
ATOM	1428	CA	PHE A 308	63.243	45.742	30.819	1.00	28.95	C
ATOM	1429	C	PHE A 308	62.560	47.025	30.362	1.00	29.95	C
ATOM	1430	O	PHE A 308	61.395	47.009	29.958	1.00	29.34	O
ATOM	1431	CB	PHE A 308	64.141	45.087	29.742	1.00	27.92	C
ATOM	1432	CG	PHE A 308	63.582	45.092	28.339	1.00	29.45	C
ATOM	1433	CD1	PHE A 308	63.520	46.272	27.594	1.00	29.48	C
ATOM	1434	CD2	PHE A 308	63.193	43.894	27.729	1.00	29.25	C
ATOM	1435	CE1	PHE A 308	63.085	46.259	26.263	1.00	28.89	C
ATOM	1436	CE2	PHE A 308	62.757	43.870	26.398	1.00	28.70	C
ATOM	1437	CZ	PHE A 308	62.704	45.056	25.664	1.00	29.12	C
ATOM	1438	N	ILE A 309	63.266	48.141	30.475	1.00	29.18	N
ATOM	1439	CA	ILE A 309	62.685	49.425	30.127	1.00	29.21	C
ATOM	1440	C	ILE A 309	63.497	50.150	29.061	1.00	27.84	C
ATOM	1441	O	ILE A 309	64.719	50.258	29.172	1.00	26.04	O
ATOM	1442	CB	ILE A 309	62.539	50.284	31.422	1.00	27.91	C
ATOM	1443	CG1	ILE A 309	61.524	49.602	32.353	1.00	26.47	C
ATOM	1444	CG2	ILE A 309	62.123	51.703	31.082	1.00	27.10	C
ATOM	1445	CD1	ILE A 309	61.390	50.207	33.733	1.00	25.58	C
ATOM	1446	N	LYS A 310	62.813	50.616	28.015	1.00	27.18	N
ATOM	1447	CA	LYS A 310	63.480	51.322	26.926	1.00	28.54	C
ATOM	1448	C	LYS A 310	63.537	52.827	27.149	1.00	27.05	C
ATOM	1449	O	LYS A 310	62.550	53.460	27.529	1.00	26.03	O
ATOM	1450	CB	LYS A 310	62.817	51.030	25.573	1.00	28.97	C
ATOM	1451	CG	LYS A 310	63.170	49.671	25.012	1.00	32.45	C
ATOM	1452	CD	LYS A 310	63.175	49.652	23.488	1.00	28.69	C
ATOM	1453	CE	LYS A 310	61.783	49.797	22.894	1.00	30.25	C
ATOM	1454	NZ	LYS A 310	61.577	51.156	22.318	1.00	30.02	N
ATOM	1455	N	ILE A 311	64.713	53.380	26.880	1.00	26.50	N
ATOM	1456	CA	ILE A 311	64.988	54.799	27.061	1.00	25.97	C
ATOM	1457	C	ILE A 311	65.140	55.546	25.744	1.00	26.10	C
ATOM	1458	O	ILE A 311	65.875	55.115	24.854	1.00	24.93	O
ATOM	1459	CB	ILE A 311	66.297	54.995	27.851	1.00	24.14	C
ATOM	1460	CG1	ILE A 311	66.229	54.208	29.162	1.00	23.37	C
ATOM	1461	CG2	ILE A 311	66.541	56.493	28.113	1.00	21.90	C
ATOM	1462	CD1	ILE A 311	67.585	53.999	29.821	1.00	22.04	C
ATOM	1463	N	GLY A 312	64.440	56.668	25.619	1.00	27.44	N
ATOM	1464	CA	GLY A 312	64.587	57.453	24.417	1.00	29.07	C
ATOM	1465	C	GLY A 312	63.364	58.017	23.740	1.00	31.30	C
ATOM	1466	O	GLY A 312	62.499	57.284	23.281	1.00	32.02	O
ATOM	1467	N	ILE A 313	63.316	59.342	23.671	1.00	34.02	N



ATOM	1468	CA	ILE	A	313	62.242	60.063	23.005	1.00	35.18	C
ATOM	1469	C	ILE	A	313	62.860	61.264	22.294	1.00	36.95	C
ATOM	1470	O	ILE	A	313	63.446	62.143	22.937	1.00	33.67	O
ATOM	1471	CB	ILE	A	313	61.184	60.588	23.991	1.00	35.37	C
ATOM	1472	CG1	ILE	A	313	60.488	59.419	24.697	1.00	37.50	C
ATOM	1473	CG2	ILE	A	313	60.161	61.420	23.236	1.00	36.43	C
ATOM	1474	CD1	ILE	A	313	59.485	59.848	25.762	1.00	34.44	C
ATOM	1475	N	GLY	A	314	62.744	61.280	20.968	1.00	39.08	N
ATOM	1476	CA	GLY	A	314	63.269	62.384	20.180	1.00	42.63	C
ATOM	1477	C	GLY	A	314	64.709	62.259	19.711	1.00	45.06	C
ATOM	1478	O	GLY	A	314	65.204	63.127	18.984	1.00	46.48	O
ATOM	1479	N	GLY	A	315	65.383	61.186	20.111	1.00	45.85	N
ATOM	1480	CA	GLY	A	315	66.767	60.997	19.716	1.00	47.36	C
ATOM	1481	C	GLY	A	315	66.970	60.175	18.456	1.00	48.37	C
ATOM	1482	O	GLY	A	315	68.067	60.169	17.901	1.00	48.87	O
ATOM	1483	N	GLY	A	316	65.929	59.482	18.002	1.00	49.42	N
ATOM	1484	CA	GLY	A	316	66.042	58.666	16.802	1.00	50.45	C
ATOM	1485	C	GLY	A	316	66.512	59.444	15.581	1.00	52.07	C
ATOM	1486	O	GLY	A	316	66.307	60.655	15.492	1.00	51.74	O
ATOM	1487	N	SER	A	317	67.137	58.748	14.634	1.00	53.21	N
ATOM	1488	CA	SER	A	317	67.640	59.384	13.417	1.00	55.05	C
ATOM	1489	C	SER	A	317	66.513	59.886	12.519	1.00	56.78	C
ATOM	1490	O	SER	A	317	66.689	60.855	11.782	1.00	57.20	O
ATOM	1491	CB	SER	A	317	68.529	58.413	12.629	1.00	53.62	C
ATOM	1492	OG	SER	A	317	67.769	57.378	12.034	1.00	52.76	O
ATOM	1493	N	ILE	A	318	65.360	59.226	12.575	1.00	59.64	N
ATOM	1494	CA	ILE	A	318	64.210	59.634	11.770	1.00	63.21	C
ATOM	1495	C	ILE	A	318	63.236	60.457	12.599	1.00	65.18	C
ATOM	1496	O	ILE	A	318	62.033	60.454	12.337	1.00	66.41	O
ATOM	1497	CB	ILE	A	318	63.425	58.425	11.193	1.00	62.53	C
ATOM	1498	CG1	ILE	A	318	62.907	57.531	12.325	1.00	61.87	C
ATOM	1499	CG2	ILE	A	318	64.292	57.668	10.216	1.00	63.60	C
ATOM	1500	CD1	ILE	A	318	63.986	56.875	13.169	1.00	63.20	C
HETATM	1501	N	CSO	A	319	63.755	61.160	13.601	1.00	67.42	N
HETATM	1502	CA	CSO	A	319	62.906	61.974	14.457	1.00	69.97	C
HETATM	1503	CB	CSO	A	319	62.908	61.424	15.883	1.00	69.24	C
HETATM	1504	SG	CSO	A	319	61.855	62.386	17.013	1.00	71.47	S
HETATM	1505	C	CSO	A	319	63.286	63.449	14.489	1.00	71.57	C
HETATM	1506	O	CSO	A	319	64.383	63.812	14.916	1.00	71.62	O
HETATM	1507	OD	CSO	A	319	60.102	62.492	16.543	1.00	68.93	O
ATOM	1508	N	ILE	A	320	62.363	64.292	14.035	1.00	73.78	N
ATOM	1509	CA	ILE	A	320	62.568	65.736	14.026	1.00	75.95	C
ATOM	1510	C	ILE	A	320	61.613	66.330	15.064	1.00	77.00	C
ATOM	1511	O	ILE	A	320	60.712	67.099	14.730	1.00	77.56	O
ATOM	1512	CB	ILE	A	320	62.250	66.346	12.636	1.00	76.42	C
ATOM	1513	CG1	ILE	A	320	62.907	65.512	11.529	1.00	76.94	C
ATOM	1514	CG2	ILE	A	320	62.740	67.793	12.577	1.00	76.02	C
ATOM	1515	CD1	ILE	A	320	64.419	65.396	11.639	1.00	77.38	C
ATOM	1516	N	THR	A	321	61.821	65.948	16.322	1.00	78.28	N
ATOM	1517	CA	THR	A	321	61.000	66.397	17.448	1.00	79.55	C
ATOM	1518	C	THR	A	321	60.432	67.809	17.303	1.00	79.96	C
ATOM	1519	O	THR	A	321	59.222	68.014	17.421	1.00	79.36	O
ATOM	1520	CB	THR	A	321	61.798	66.340	18.767	1.00	79.97	C
ATOM	1521	OG1	THR	A	321	62.325	65.020	18.951	1.00	80.89	O
ATOM	1522	CG2	THR	A	321	60.902	66.688	19.942	1.00	79.20	C
ATOM	1523	N	ARG	A	322	61.312	68.776	17.057	1.00	80.56	N
ATOM	1524	CA	ARG	A	322	60.911	70.173	16.903	1.00	81.44	C

ATOM	1525	C	ARG	A	322	60.282	70.402	15.533	1.00	80.96	C
ATOM	1526	O	ARG	A	322	60.658	71.317	14.796	1.00	81.59	O
ATOM	1527	CB	ARG	A	322	62.128	71.076	17.090	1.00	82.63	C
ATOM	1528	CG	ARG	A	322	62.904	70.739	18.345	1.00	84.75	C
ATOM	1529	CD	ARG	A	322	64.194	71.520	18.459	1.00	85.81	C
ATOM	1530	NE	ARG	A	322	65.052	70.945	19.491	1.00	86.61	N
ATOM	1531	CZ	ARG	A	322	66.238	71.432	19.834	1.00	87.87	C
ATOM	1532	NH1	ARG	A	322	66.711	72.512	19.226	1.00	88.28	N
ATOM	1533	NH2	ARG	A	322	66.955	70.831	20.775	1.00	88.07	N
ATOM	1534	N	GLU	A	323	59.318	69.549	15.211	1.00	79.65	N
ATOM	1535	CA	GLU	A	323	58.595	69.596	13.949	1.00	78.09	C
ATOM	1536	C	GLU	A	323	57.395	68.679	14.153	1.00	76.08	C
ATOM	1537	O	GLU	A	323	56.482	68.618	13.328	1.00	75.54	O
ATOM	1538	CB	GLU	A	323	59.485	69.078	12.818	1.00	79.51	C
ATOM	1539	CG	GLU	A	323	58.886	69.206	11.429	1.00	82.04	C
ATOM	1540	CD	GLU	A	323	59.856	68.784	10.341	1.00	83.25	C
ATOM	1541	OE1	GLU	A	323	60.262	67.601	10.328	1.00	84.45	O
ATOM	1542	OE2	GLU	A	323	60.216	69.638	9.501	1.00	83.53	O
ATOM	1543	N	GLN	A	324	57.419	67.969	15.278	1.00	73.73	N
ATOM	1544	CA	GLN	A	324	56.358	67.047	15.656	1.00	70.84	C
ATOM	1545	C	GLN	A	324	55.584	67.624	16.841	1.00	67.80	C
ATOM	1546	O	GLN	A	324	54.752	68.516	16.665	1.00	68.23	O
ATOM	1547	CB	GLN	A	324	56.951	65.684	16.028	1.00	72.52	C
ATOM	1548	CG	GLN	A	324	57.667	64.984	14.883	1.00	74.98	C
ATOM	1549	CD	GLN	A	324	56.732	64.622	13.740	1.00	77.08	C
ATOM	1550	OE1	GLN	A	324	56.070	65.485	13.162	1.00	78.31	O
ATOM	1551	NE2	GLN	A	324	56.678	63.338	13.407	1.00	78.07	N
ATOM	1552	N	LYS	A	325	55.865	67.129	18.045	1.00	63.07	N
ATOM	1553	CA	LYS	A	325	55.169	67.608	19.237	1.00	58.26	C
ATOM	1554	C	LYS	A	325	56.069	68.271	20.273	1.00	54.26	C
ATOM	1555	O	LYS	A	325	55.592	68.754	21.301	1.00	53.55	O
ATOM	1556	CB	LYS	A	325	54.387	66.466	19.894	1.00	58.47	C
ATOM	1557	CG	LYS	A	325	53.233	65.959	19.042	1.00	57.42	C
ATOM	1558	CD	LYS	A	325	52.221	65.177	19.862	1.00	57.29	C
ATOM	1559	CE	LYS	A	325	52.836	63.949	20.508	1.00	55.50	C
ATOM	1560	NZ	LYS	A	325	51.779	63.110	21.124	1.00	55.85	N
ATOM	1561	N	GLY	A	326	57.369	68.292	20.005	1.00	49.91	N
ATOM	1562	CA	GLY	A	326	58.288	68.924	20.929	1.00	46.08	C
ATOM	1563	C	GLY	A	326	58.462	68.239	22.271	1.00	44.72	C
ATOM	1564	O	GLY	A	326	58.571	68.909	23.300	1.00	42.35	O
ATOM	1565	N	ILE	A	327	58.472	66.908	22.269	1.00	42.55	N
ATOM	1566	CA	ILE	A	327	58.676	66.151	23.496	1.00	41.64	C
ATOM	1567	C	ILE	A	327	59.998	65.398	23.351	1.00	40.52	C
ATOM	1568	O	ILE	A	327	60.387	65.011	22.248	1.00	39.17	O
ATOM	1569	CB	ILE	A	327	57.526	65.136	23.764	1.00	43.00	C
ATOM	1570	CG1	ILE	A	327	57.530	64.026	22.713	1.00	43.54	C
ATOM	1571	CG2	ILE	A	327	56.179	65.859	23.752	1.00	43.95	C
ATOM	1572	CD1	ILE	A	327	56.507	62.920	22.986	1.00	45.42	C
ATOM	1573	N	GLY	A	328	60.706	65.206	24.455	1.00	39.74	N
ATOM	1574	CA	GLY	A	328	61.963	64.490	24.362	1.00	38.49	C
ATOM	1575	C	GLY	A	328	63.040	64.952	25.321	1.00	37.48	C
ATOM	1576	O	GLY	A	328	62.810	65.790	26.201	1.00	33.46	O
ATOM	1577	N	ARG	A	329	64.233	64.399	25.132	1.00	35.76	N
ATOM	1578	CA	ARG	A	329	65.361	64.723	25.981	1.00	34.21	C
ATOM	1579	C	ARG	A	329	66.625	64.178	25.333	1.00	32.60	C
ATOM	1580	O	ARG	A	329	66.592	63.117	24.719	1.00	33.20	O
ATOM	1581	CB	ARG	A	329	65.152	64.070	27.353	1.00	34.78	C

TABLE 2

ATOM	1582	CG	ARG	A	329	66.083	64.550	28.441	1.00	32.95	C
ATOM	1583	CD	ARG	A	329	65.843	63.788	29.726	1.00	32.61	C
ATOM	1584	NE	ARG	A	329	66.249	64.578	30.881	1.00	32.32	N
ATOM	1585	CZ	ARG	A	329	66.174	64.166	32.142	1.00	33.26	C
ATOM	1586	NH1	ARG	A	329	65.708	62.956	32.431	1.00	31.12	N
ATOM	1587	NH2	ARG	A	329	66.561	64.975	33.118	1.00	34.83	N
ATOM	1588	N	GLY	A	330	67.733	64.908	25.452	1.00	32.13	N
ATOM	1589	CA	GLY	A	330	68.978	64.419	24.893	1.00	29.42	C
ATOM	1590	C	GLY	A	330	69.146	62.988	25.382	1.00	27.97	C
ATOM	1591	O	GLY	A	330	68.986	62.718	26.569	1.00	26.61	O
ATOM	1592	N	GLN	A	331	69.455	62.076	24.469	1.00	28.50	N
ATOM	1593	CA	GLN	A	331	69.611	60.667	24.801	1.00	28.43	C
ATOM	1594	C	GLN	A	331	70.586	60.394	25.947	1.00	28.88	C
ATOM	1595	O	GLN	A	331	70.294	59.570	26.819	1.00	29.14	O
ATOM	1596	CB	GLN	A	331	70.049	59.876	23.561	1.00	28.74	C
ATOM	1597	CG	GLN	A	331	69.975	58.362	23.734	1.00	30.37	C
ATOM	1598	CD	GLN	A	331	68.540	57.846	23.795	1.00	34.54	C
ATOM	1599	OE1	GLN	A	331	68.288	56.727	24.250	1.00	34.07	O
ATOM	1600	NE2	GLN	A	331	67.596	58.655	23.324	1.00	32.56	N
ATOM	1601	N	ALA	A	332	71.733	61.073	25.951	1.00	26.91	N
ATOM	1602	CA	ALA	A	332	72.732	60.857	26.999	1.00	27.04	C
ATOM	1603	C	ALA	A	332	72.165	61.146	28.389	1.00	26.51	C
ATOM	1604	O	ALA	A	332	72.235	60.304	29.289	1.00	24.75	O
ATOM	1605	CB	ALA	A	332	73.981	61.725	26.743	1.00	26.35	C
ATOM	1606	N	THR	A	333	71.602	62.337	28.555	1.00	25.80	N
ATOM	1607	CA	THR	A	333	71.021	62.735	29.828	1.00	26.22	C
ATOM	1608	C	THR	A	333	69.921	61.763	30.251	1.00	26.29	C
ATOM	1609	O	THR	A	333	69.798	61.427	31.430	1.00	24.39	O
ATOM	1610	CB	THR	A	333	70.421	64.145	29.740	1.00	27.31	C
ATOM	1611	OG1	THR	A	333	71.440	65.071	29.336	1.00	28.44	O
ATOM	1612	CG2	THR	A	333	69.863	64.566	31.094	1.00	27.55	C
ATOM	1613	N	ALA	A	334	69.128	61.321	29.276	1.00	25.58	N
ATOM	1614	CA	ALA	A	334	68.040	60.384	29.520	1.00	25.32	C
ATOM	1615	C	ALA	A	334	68.570	59.079	30.125	1.00	24.79	C
ATOM	1616	O	ALA	A	334	68.064	58.603	31.146	1.00	24.60	O
ATOM	1617	CB	ALA	A	334	67.303	60.094	28.210	1.00	24.05	C
ATOM	1618	N	VAL	A	335	69.588	58.506	29.491	1.00	24.43	N
ATOM	1619	CA	VAL	A	335	70.181	57.256	29.964	1.00	24.60	C
ATOM	1620	C	VAL	A	335	70.774	57.420	31.362	1.00	25.20	C
ATOM	1621	O	VAL	A	335	70.484	56.635	32.271	1.00	26.11	O
ATOM	1622	CB	VAL	A	335	71.288	56.765	28.995	1.00	26.29	C
ATOM	1623	CG1	VAL	A	335	71.986	55.527	29.564	1.00	25.97	C
ATOM	1624	CG2	VAL	A	335	70.678	56.442	27.640	1.00	24.78	C
ATOM	1625	N	ILE	A	336	71.600	58.448	31.533	1.00	25.74	N
ATOM	1626	CA	ILE	A	336	72.238	58.713	32.815	1.00	26.05	C
ATOM	1627	C	ILE	A	336	71.213	58.842	33.945	1.00	27.20	C
ATOM	1628	O	ILE	A	336	71.395	58.287	35.030	1.00	26.21	O
ATOM	1629	CB	ILE	A	336	73.084	59.998	32.744	1.00	25.46	C
ATOM	1630	CG1	ILE	A	336	74.275	59.769	31.806	1.00	24.75	C
ATOM	1631	CG2	ILE	A	336	73.552	60.409	34.141	1.00	22.41	C
ATOM	1632	CD1	ILE	A	336	75.078	61.022	31.519	1.00	26.47	C
ATOM	1633	N	ASP	A	337	70.130	59.565	33.681	1.00	27.99	N
ATOM	1634	CA	ASP	A	337	69.090	59.769	34.686	1.00	28.97	C
ATOM	1635	C	ASP	A	337	68.318	58.476	35.001	1.00	29.22	C
ATOM	1636	O	ASP	A	337	68.057	58.160	36.165	1.00	27.09	O
ATOM	1637	CB	ASP	A	337	68.110	60.845	34.209	1.00	31.92	C
ATOM	1638	CG	ASP	A	337	67.111	61.234	35.279	1.00	35.94	C

ATOM	1639	OD1	ASP	A	337	66.026	61.755	34.937	1.00	39.65	O
ATOM	1640	OD2	ASP	A	337	67.416	61.026	36.472	1.00	40.82	O
ATOM	1641	N	VAL	A	338	67.950	57.739	33.956	1.00	27.65	N
ATOM	1642	CA	VAL	A	338	67.205	56.502	34.133	1.00	26.39	C
ATOM	1643	C	VAL	A	338	68.058	55.470	34.854	1.00	25.81	C
ATOM	1644	O	VAL	A	338	67.575	54.780	35.748	1.00	25.37	O
ATOM	1645	CB	VAL	A	338	66.720	55.930	32.771	1.00	24.93	C
ATOM	1646	CG1	VAL	A	338	66.113	54.545	32.971	1.00	23.01	C
ATOM	1647	CG2	VAL	A	338	65.677	56.870	32.155	1.00	23.63	C
ATOM	1648	N	VAL	A	339	69.323	55.375	34.460	1.00	25.47	N
ATOM	1649	CA	VAL	A	339	70.252	54.440	35.075	1.00	25.33	C
ATOM	1650	C	VAL	A	339	70.413	54.711	36.572	1.00	27.56	C
ATOM	1651	O	VAL	A	339	70.493	53.773	37.362	1.00	29.02	O
ATOM	1652	CB	VAL	A	339	71.633	54.500	34.383	1.00	24.83	C
ATOM	1653	CG1	VAL	A	339	72.701	53.830	35.246	1.00	23.64	C
ATOM	1654	CG2	VAL	A	339	71.549	53.809	33.031	1.00	22.84	C
ATOM	1655	N	ALA	A	340	70.458	55.982	36.962	1.00	27.28	N
ATOM	1656	CA	ALA	A	340	70.596	56.330	38.374	1.00	28.29	C
ATOM	1657	C	ALA	A	340	69.360	55.861	39.141	1.00	29.41	C
ATOM	1658	O	ALA	A	340	69.461	55.348	40.260	1.00	29.34	O
ATOM	1659	CB	ALA	A	340	70.775	57.835	38.536	1.00	25.77	C
ATOM	1660	N	GLU	A	341	68.192	56.031	38.531	1.00	28.19	N
ATOM	1661	CA	GLU	A	341	66.949	55.619	39.168	1.00	29.67	C
ATOM	1662	C	GLU	A	341	66.878	54.093	39.245	1.00	28.17	C
ATOM	1663	O	GLU	A	341	66.419	53.543	40.236	1.00	27.43	O
ATOM	1664	CB	GLU	A	341	65.750	56.151	38.384	1.00	30.31	C
ATOM	1665	CG	GLU	A	341	64.433	56.116	39.153	1.00	33.93	C
ATOM	1666	CD	GLU	A	341	64.441	57.036	40.368	1.00	36.33	C
ATOM	1667	OE1	GLU	A	341	65.031	58.137	40.294	1.00	37.90	O
ATOM	1668	OE2	GLU	A	341	63.843	56.668	41.395	1.00	37.92	O
ATOM	1669	N	ARG	A	342	67.335	53.420	38.192	1.00	28.17	N
ATOM	1670	CA	ARG	A	342	67.328	51.959	38.140	1.00	27.23	C
ATOM	1671	C	ARG	A	342	68.220	51.382	39.241	1.00	26.35	C
ATOM	1672	O	ARG	A	342	67.861	50.394	39.875	1.00	27.18	O
ATOM	1673	CB	ARG	A	342	67.799	51.481	36.756	1.00	26.16	C
ATOM	1674	CG	ARG	A	342	67.736	49.961	36.513	1.00	25.81	C
ATOM	1675	CD	ARG	A	342	68.988	49.223	37.006	1.00	22.94	C
ATOM	1676	NE	ARG	A	342	70.230	49.706	36.405	1.00	23.37	N
ATOM	1677	CZ	ARG	A	342	70.606	49.502	35.141	1.00	22.98	C
ATOM	1678	NH1	ARG	A	342	69.837	48.816	34.304	1.00	22.05	N
ATOM	1679	NH2	ARG	A	342	71.771	49.977	34.713	1.00	22.35	N
ATOM	1680	N	ASN	A	343	69.372	52.005	39.472	1.00	26.04	N
ATOM	1681	CA	ASN	A	343	70.288	51.542	40.510	1.00	27.90	C
ATOM	1682	C	ASN	A	343	69.715	51.821	41.902	1.00	30.25	C
ATOM	1683	O	ASN	A	343	69.891	51.030	42.827	1.00	31.34	O
ATOM	1684	CB	ASN	A	343	71.662	52.202	40.353	1.00	25.88	C
ATOM	1685	CG	ASN	A	343	72.379	51.755	39.086	1.00	28.08	C
ATOM	1686	OD1	ASN	A	343	72.029	50.729	38.494	1.00	26.63	O
ATOM	1687	ND2	ASN	A	343	73.396	52.510	38.674	1.00	26.34	N
ATOM	1688	N	LYS	A	344	69.017	52.941	42.043	1.00	31.32	N
ATOM	1689	CA	LYS	A	344	68.392	53.296	43.308	1.00	34.03	C
ATOM	1690	C	LYS	A	344	67.296	52.260	43.561	1.00	33.69	C
ATOM	1691	O	LYS	A	344	67.151	51.736	44.668	1.00	34.47	O
ATOM	1692	CB	LYS	A	344	67.791	54.705	43.209	1.00	36.27	C
ATOM	1693	CG	LYS	A	344	67.106	55.221	44.467	1.00	42.99	C
ATOM	1694	CD	LYS	A	344	66.596	56.654	44.257	1.00	46.73	C
ATOM	1695	CE	LYS	A	344	65.820	57.178	45.469	1.00	49.48	C

TABLE 2

ATOM	1696	NZ	LYS	A	344	66.664	57.318	46.702	1.00	53.65	N
ATOM	1697	N	TYR	A	345	66.541	51.956	42.512	1.00	32.48	N
ATOM	1698	CA	TYR	A	345	65.463	50.979	42.590	1.00	32.33	C
ATOM	1699	C	TYR	A	345	66.008	49.599	42.989	1.00	32.68	C
ATOM	1700	O	TYR	A	345	65.413	48.901	43.811	1.00	32.28	O
ATOM	1701	CB	TYR	A	345	64.764	50.878	41.241	1.00	30.33	C
ATOM	1702	CG	TYR	A	345	63.474	50.092	41.273	1.00	31.92	C
ATOM	1703	CD1	TYR	A	345	62.291	50.685	41.702	1.00	32.27	C
ATOM	1704	CD2	TYR	A	345	63.427	48.767	40.830	1.00	31.10	C
ATOM	1705	CE1	TYR	A	345	61.090	49.988	41.681	1.00	32.84	C
ATOM	1706	CE2	TYR	A	345	62.230	48.061	40.805	1.00	32.54	C
ATOM	1707	CZ	TYR	A	345	61.066	48.683	41.228	1.00	33.59	C
ATOM	1708	OH	TYR	A	345	59.869	48.022	41.152	1.00	35.30	O
ATOM	1709	N	PHE	A	346	67.133	49.211	42.396	1.00	32.82	N
ATOM	1710	CA	PHE	A	346	67.759	47.928	42.703	1.00	34.48	C
ATOM	1711	C	PHE	A	346	68.103	47.840	44.193	1.00	35.77	C
ATOM	1712	O	PHE	A	346	67.859	46.827	44.843	1.00	34.19	O
ATOM	1713	CB	PHE	A	346	69.037	47.751	41.881	1.00	34.20	C
ATOM	1714	CG	PHE	A	346	69.817	46.518	42.232	1.00	35.55	C
ATOM	1715	CD1	PHE	A	346	69.302	45.254	41.964	1.00	34.50	C
ATOM	1716	CD2	PHE	A	346	71.060	46.620	42.850	1.00	37.04	C
ATOM	1717	CE1	PHE	A	346	70.010	44.107	42.304	1.00	35.77	C
ATOM	1718	CE2	PHE	A	346	71.779	45.478	43.198	1.00	38.55	C
ATOM	1719	CZ	PHE	A	346	71.250	44.217	42.923	1.00	38.73	C
ATOM	1720	N	GLU	A	347	68.660	48.921	44.723	1.00	37.60	N
ATOM	1721	CA	GLU	A	347	69.054	48.986	46.122	1.00	40.87	C
ATOM	1722	C	GLU	A	347	67.875	48.954	47.091	1.00	40.71	C
ATOM	1723	O	GLU	A	347	68.014	48.483	48.218	1.00	41.55	O
ATOM	1724	CB	GLU	A	347	69.887	50.247	46.361	1.00	42.18	C
ATOM	1725	CG	GLU	A	347	71.112	50.334	45.461	1.00	49.56	C
ATOM	1726	CD	GLU	A	347	72.249	49.423	45.901	1.00	54.08	C
ATOM	1727	OE1	GLU	A	347	71.994	48.244	46.240	1.00	57.12	O
ATOM	1728	OE2	GLU	A	347	73.412	49.887	45.899	1.00	57.88	O
ATOM	1729	N	GLU	A	348	66.717	49.446	46.656	1.00	39.71	N
ATOM	1730	CA	GLU	A	348	65.543	49.464	47.523	1.00	39.97	C
ATOM	1731	C	GLU	A	348	64.782	48.149	47.503	1.00	38.48	C
ATOM	1732	O	GLU	A	348	64.283	47.705	48.529	1.00	38.26	O
ATOM	1733	CB	GLU	A	348	64.543	50.550	47.100	1.00	41.21	C
ATOM	1734	CG	GLU	A	348	65.120	51.879	46.664	1.00	44.97	C
ATOM	1735	CD	GLU	A	348	64.044	52.828	46.141	1.00	45.86	C
ATOM	1736	OE1	GLU	A	348	63.112	52.360	45.454	1.00	46.60	O
ATOM	1737	OE2	GLU	A	348	64.135	54.043	46.405	1.00	48.18	O
ATOM	1738	N	THR	A	349	64.696	47.536	46.327	1.00	37.21	N
ATOM	1739	CA	THR	A	349	63.922	46.314	46.146	1.00	35.37	C
ATOM	1740	C	THR	A	349	64.677	45.019	45.849	1.00	35.43	C
ATOM	1741	O	THR	A	349	64.093	43.943	45.910	1.00	36.36	O
ATOM	1742	CB	THR	A	349	62.906	46.507	45.004	1.00	35.82	C
ATOM	1743	OG1	THR	A	349	63.613	46.564	43.755	1.00	33.52	O
ATOM	1744	CG2	THR	A	349	62.116	47.812	45.190	1.00	34.32	C
ATOM	1745	N	GLY	A	350	65.957	45.114	45.513	1.00	35.89	N
ATOM	1746	CA	GLY	A	350	66.715	43.917	45.183	1.00	34.68	C
ATOM	1747	C	GLY	A	350	66.415	43.442	43.766	1.00	33.95	C
ATOM	1748	O	GLY	A	350	66.870	42.381	43.339	1.00	35.21	O
ATOM	1749	N	ILE	A	351	65.639	44.231	43.029	1.00	33.01	N
ATOM	1750	CA	ILE	A	351	65.283	43.885	41.654	1.00	30.90	C
ATOM	1751	C	ILE	A	351	66.124	44.690	40.665	1.00	29.41	C
ATOM	1752	O	ILE	A	351	66.117	45.911	40.699	1.00	27.96	O

TABLE 2

ATOM	1753	CB	ILE	A	351	63.795	44.197	41.356	1.00	33.21	C
ATOM	1754	CG1	ILE	A	351	62.885	43.471	42.355	1.00	34.74	C
ATOM	1755	CG2	ILE	A	351	63.455	43.779	39.930	1.00	32.48	C
ATOM	1756	CD1	ILE	A	351	61.424	43.894	42.262	1.00	34.70	C
ATOM	1757	N	TYR	A	352	66.842	44.005	39.785	1.00	28.99	N
ATOM	1758	CA	TYR	A	352	67.655	44.685	38.787	1.00	28.73	C
ATOM	1759	C	TYR	A	352	66.907	44.657	37.464	1.00	28.49	C
ATOM	1760	O	TYR	A	352	66.651	43.588	36.921	1.00	27.67	O
ATOM	1761	CB	TYR	A	352	69.004	43.991	38.593	1.00	27.77	C
ATOM	1762	CG	TYR	A	352	69.899	44.726	37.617	1.00	27.14	C
ATOM	1763	CD1	TYR	A	352	70.688	45.799	38.038	1.00	23.99	C
ATOM	1764	CD2	TYR	A	352	69.925	44.376	36.267	1.00	26.25	C
ATOM	1765	CE1	TYR	A	352	71.481	46.504	37.139	1.00	24.83	C
ATOM	1766	CE2	TYR	A	352	70.715	45.076	35.358	1.00	26.68	C
ATOM	1767	CZ	TYR	A	352	71.492	46.138	35.804	1.00	24.57	C
ATOM	1768	OH	TYR	A	352	72.302	46.809	34.923	1.00	26.41	O
ATOM	1769	N	ILE	A	353	66.554	45.831	36.948	1.00	28.02	N
ATOM	1770	CA	ILE	A	353	65.843	45.897	35.681	1.00	26.70	C
ATOM	1771	C	ILE	A	353	66.761	46.407	34.575	1.00	27.00	C
ATOM	1772	O	ILE	A	353	67.247	47.536	34.631	1.00	27.67	O
ATOM	1773	CB	ILE	A	353	64.620	46.826	35.780	1.00	28.56	C
ATOM	1774	CG1	ILE	A	353	63.702	46.346	36.915	1.00	29.44	C
ATOM	1775	CG2	ILE	A	353	63.875	46.840	34.443	1.00	28.04	C
ATOM	1776	CD1	ILE	A	353	62.450	47.169	37.103	1.00	27.09	C
ATOM	1777	N	PRO	A	354	67.020	45.574	33.556	1.00	26.94	N
ATOM	1778	CA	PRO	A	354	67.892	45.999	32.456	1.00	25.14	C
ATOM	1779	C	PRO	A	354	67.246	47.162	31.711	1.00	25.78	C
ATOM	1780	O	PRO	A	354	66.020	47.210	31.578	1.00	24.81	O
ATOM	1781	CB	PRO	A	354	67.988	44.748	31.582	1.00	23.53	C
ATOM	1782	CG	PRO	A	354	67.734	43.614	32.558	1.00	24.17	C
ATOM	1783	CD	PRO	A	354	66.612	44.167	33.392	1.00	25.08	C
ATOM	1784	N	VAL	A	355	68.061	48.106	31.242	1.00	25.52	N
ATOM	1785	CA	VAL	A	355	67.524	49.237	30.498	1.00	24.60	C
ATOM	1786	C	VAL	A	355	68.152	49.287	29.124	1.00	24.64	C
ATOM	1787	O	VAL	A	355	69.309	48.914	28.937	1.00	24.59	O
ATOM	1788	CB	VAL	A	355	67.727	50.596	31.233	1.00	24.72	C
ATOM	1789	CG1	VAL	A	355	66.987	50.566	32.560	1.00	23.24	C
ATOM	1790	CG2	VAL	A	355	69.209	50.905	31.425	1.00	22.37	C
ATOM	1791	N	CYS	A	356	67.365	49.746	28.163	1.00	24.56	N
ATOM	1792	CA	CYS	A	356	67.794	49.819	26.783	1.00	24.50	C
ATOM	1793	C	CYS	A	356	67.869	51.245	26.263	1.00	24.85	C
ATOM	1794	O	CYS	A	356	66.901	51.998	26.368	1.00	25.28	O
ATOM	1795	CB	CYS	A	356	66.816	49.018	25.919	1.00	24.42	C
ATOM	1796	SG	CYS	A	356	67.077	49.153	24.147	1.00	27.02	S
ATOM	1797	N	SER	A	357	69.017	51.614	25.704	1.00	24.06	N
ATOM	1798	CA	SER	A	357	69.172	52.944	25.123	1.00	24.90	C
ATOM	1799	C	SER	A	357	68.681	52.774	23.694	1.00	24.81	C
ATOM	1800	O	SER	A	357	69.300	52.076	22.897	1.00	24.49	O
ATOM	1801	CB	SER	A	357	70.629	53.394	25.110	1.00	23.83	C
ATOM	1802	OG	SER	A	357	70.717	54.691	24.539	1.00	26.00	O
ATOM	1803	N	ASP	A	358	67.562	53.414	23.389	1.00	25.07	N
ATOM	1804	CA	ASP	A	358	66.927	53.308	22.085	1.00	26.86	C
ATOM	1805	C	ASP	A	358	67.067	54.547	21.200	1.00	26.28	C
ATOM	1806	O	ASP	A	358	66.510	55.598	21.504	1.00	25.81	O
ATOM	1807	CB	ASP	A	358	65.442	52.986	22.309	1.00	26.49	C
ATOM	1808	CG	ASP	A	358	64.672	52.770	21.021	1.00	26.81	C
ATOM	1809	OD1	ASP	A	358	65.293	52.598	19.949	1.00	28.14	O

TABLE 2

ATOM	1810	OD2	ASP	A	358	63.425	52.757	21.099	1.00	25.32	O
ATOM	1811	N	GLY	A	359	67.811	54.409	20.106	1.00	28.28	N
ATOM	1812	CA	GLY	A	359	67.975	55.509	19.174	1.00	30.20	C
ATOM	1813	C	GLY	A	359	69.098	56.486	19.460	1.00	33.11	C
ATOM	1814	O	GLY	A	359	69.637	56.539	20.564	1.00	32.49	O
ATOM	1815	N	GLY	A	360	69.456	57.260	18.442	1.00	34.01	N
ATOM	1816	CA	GLY	A	360	70.504	58.243	18.602	1.00	36.30	C
ATOM	1817	C	GLY	A	360	71.916	57.755	18.357	1.00	37.16	C
ATOM	1818	O	GLY	A	360	72.849	58.538	18.482	1.00	39.18	O
ATOM	1819	N	ILE	A	361	72.096	56.481	18.021	1.00	38.47	N
ATOM	1820	CA	ILE	A	361	73.442	55.976	17.762	1.00	40.22	C
ATOM	1821	C	ILE	A	361	73.856	56.399	16.359	1.00	42.51	C
ATOM	1822	O	ILE	A	361	73.296	55.922	15.369	1.00	42.14	O
ATOM	1823	CB	ILE	A	361	73.527	54.430	17.848	1.00	40.03	C
ATOM	1824	CG1	ILE	A	361	73.133	53.945	19.247	1.00	38.70	C
ATOM	1825	CG2	ILE	A	361	74.953	53.974	17.527	1.00	39.30	C
ATOM	1826	CD1	ILE	A	361	74.077	54.379	20.352	1.00	38.35	C
ATOM	1827	N	VAL	A	362	74.835	57.297	16.284	1.00	44.13	N
ATOM	1828	CA	VAL	A	362	75.326	57.799	15.007	1.00	45.18	C
ATOM	1829	C	VAL	A	362	76.688	57.200	14.659	1.00	46.18	C
ATOM	1830	O	VAL	A	362	76.943	56.875	13.498	1.00	47.54	O
ATOM	1831	CB	VAL	A	362	75.437	59.336	15.030	1.00	46.11	C
ATOM	1832	CG1	VAL	A	362	75.853	59.856	13.653	1.00	47.64	C
ATOM	1833	CG2	VAL	A	362	74.099	59.940	15.440	1.00	47.33	C
ATOM	1834	N	TYR	A	363	77.552	57.052	15.665	1.00	44.63	N
ATOM	1835	CA	TYR	A	363	78.889	56.482	15.473	1.00	42.52	C
ATOM	1836	C	TYR	A	363	79.087	55.265	16.370	1.00	39.50	C
ATOM	1837	O	TYR	A	363	78.395	55.109	17.373	1.00	38.80	O
ATOM	1838	CB	TYR	A	363	79.960	57.519	15.803	1.00	44.72	C
ATOM	1839	CG	TYR	A	363	79.838	58.794	15.010	1.00	48.91	C
ATOM	1840	CD1	TYR	A	363	79.930	58.782	13.619	1.00	51.13	C
ATOM	1841	CD2	TYR	A	363	79.639	60.016	15.649	1.00	50.12	C
ATOM	1842	CE1	TYR	A	363	79.829	59.957	12.882	1.00	53.53	C
ATOM	1843	CE2	TYR	A	363	79.538	61.199	14.921	1.00	52.91	C
ATOM	1844	CZ	TYR	A	363	79.636	61.162	13.539	1.00	53.71	C
ATOM	1845	OH	TYR	A	363	79.567	62.330	12.813	1.00	56.33	O
ATOM	1846	N	ASP	A	364	80.040	54.409	16.024	1.00	37.74	N
ATOM	1847	CA	ASP	A	364	80.289	53.221	16.831	1.00	37.31	C
ATOM	1848	C	ASP	A	364	80.610	53.556	18.282	1.00	36.24	C
ATOM	1849	O	ASP	A	364	80.175	52.852	19.192	1.00	37.36	O
ATOM	1850	CB	ASP	A	364	81.441	52.389	16.259	1.00	39.54	C
ATOM	1851	CG	ASP	A	364	81.104	51.746	14.926	1.00	41.10	C
ATOM	1852	OD1	ASP	A	364	79.976	51.235	14.763	1.00	40.94	O
ATOM	1853	OD2	ASP	A	364	81.985	51.738	14.042	1.00	44.42	O
ATOM	1854	N	TYR	A	365	81.359	54.631	18.508	1.00	33.86	N
ATOM	1855	CA	TYR	A	365	81.733	54.989	19.870	1.00	33.09	C
ATOM	1856	C	TYR	A	365	80.544	55.418	20.733	1.00	31.64	C
ATOM	1857	O	TYR	A	365	80.646	55.456	21.955	1.00	30.06	O
ATOM	1858	CB	TYR	A	365	82.828	56.066	19.859	1.00	31.22	C
ATOM	1859	CG	TYR	A	365	82.342	57.493	19.813	1.00	34.92	C
ATOM	1860	CD1	TYR	A	365	82.131	58.216	20.987	1.00	35.27	C
ATOM	1861	CD2	TYR	A	365	82.136	58.140	18.595	1.00	36.06	C
ATOM	1862	CE1	TYR	A	365	81.735	59.549	20.948	1.00	37.45	C
ATOM	1863	CE2	TYR	A	365	81.738	59.476	18.545	1.00	38.40	C
ATOM	1864	CZ	TYR	A	365	81.543	60.173	19.724	1.00	38.62	C
ATOM	1865	OH	TYR	A	365	81.174	61.500	19.676	1.00	43.03	O
ATOM	1866	N	HIS	A	366	79.420	55.737	20.098	1.00	31.37	N

TABLE 2

ATOM	1867	CA	HIS A 366	78.231	56.110	20.850	1.00	30.85	C
ATOM	1868	C	HIS A 366	77.743	54.859	21.571	1.00	28.97	C
ATOM	1869	O	HIS A 366	77.130	54.947	22.630	1.00	28.47	O
ATOM	1870	CB	HIS A 366	77.125	56.635	19.926	1.00	31.13	C
ATOM	1871	CG	HIS A 366	77.373	58.016	19.406	1.00	31.77	C
ATOM	1872	ND1	HIS A 366	78.311	58.862	19.957	1.00	33.13	N
ATOM	1873	CD2	HIS A 366	76.765	58.719	18.422	1.00	31.89	C
ATOM	1874	CE1	HIS A 366	78.267	60.028	19.339	1.00	31.00	C
ATOM	1875	NE2	HIS A 366	77.337	59.968	18.405	1.00	32.26	N
ATOM	1876	N	MET A 367	78.017	53.697	20.979	1.00	27.68	N
ATOM	1877	CA	MET A 367	77.633	52.419	21.580	1.00	28.37	C
ATOM	1878	C	MET A 367	78.372	52.283	22.909	1.00	26.83	C
ATOM	1879	O	MET A 367	77.774	51.998	23.938	1.00	27.33	O
ATOM	1880	CB	MET A 367	78.027	51.240	20.678	1.00	26.41	C
ATOM	1881	CG	MET A 367	77.301	51.164	19.333	1.00	29.28	C
ATOM	1882	SD	MET A 367	77.864	49.737	18.350	1.00	31.67	S
ATOM	1883	CE	MET A 367	76.804	49.861	16.903	1.00	31.17	C
ATOM	1884	N	THR A 368	79.686	52.485	22.868	1.00	27.26	N
ATOM	1885	CA	THR A 368	80.519	52.393	24.062	1.00	27.02	C
ATOM	1886	C	THR A 368	80.035	53.402	25.106	1.00	26.24	C
ATOM	1887	O	THR A 368	79.960	53.092	26.288	1.00	26.81	O
ATOM	1888	CB	THR A 368	81.998	52.667	23.713	1.00	27.29	C
ATOM	1889	OG1	THR A 368	82.350	51.907	22.548	1.00	28.57	O
ATOM	1890	CG2	THR A 368	82.912	52.252	24.861	1.00	26.87	C
ATOM	1891	N	LEU A 369	79.701	54.610	24.664	1.00	25.92	N
ATOM	1892	CA	LEU A 369	79.205	55.636	25.578	1.00	27.25	C
ATOM	1893	C	LEU A 369	77.913	55.206	26.263	1.00	25.90	C
ATOM	1894	O	LEU A 369	77.805	55.280	27.483	1.00	26.13	O
ATOM	1895	CB	LEU A 369	78.956	56.949	24.835	1.00	27.34	C
ATOM	1896	CG	LEU A 369	80.177	57.813	24.525	1.00	30.74	C
ATOM	1897	CD1	LEU A 369	79.731	59.030	23.718	1.00	30.74	C
ATOM	1898	CD2	LEU A 369	80.855	58.244	25.823	1.00	27.53	C
ATOM	1899	N	ALA A 370	76.946	54.755	25.464	1.00	25.24	N
ATOM	1900	CA	ALA A 370	75.644	54.313	25.966	1.00	25.58	C
ATOM	1901	C	ALA A 370	75.804	53.233	27.037	1.00	23.76	C
ATOM	1902	O	ALA A 370	75.192	53.294	28.099	1.00	24.01	O
ATOM	1903	CB	ALA A 370	74.792	53.787	24.809	1.00	20.78	C
ATOM	1904	N	LEU A 371	76.638	52.248	26.745	1.00	24.06	N
ATOM	1905	CA	LEU A 371	76.892	51.162	27.677	1.00	24.06	C
ATOM	1906	C	LEU A 371	77.599	51.698	28.926	1.00	24.64	C
ATOM	1907	O	LEU A 371	77.223	51.360	30.042	1.00	24.05	O
ATOM	1908	CB	LEU A 371	77.750	50.086	26.990	1.00	22.32	C
ATOM	1909	CG	LEU A 371	77.084	49.415	25.772	1.00	25.62	C
ATOM	1910	CD1	LEU A 371	78.104	48.572	25.004	1.00	24.75	C
ATOM	1911	CD2	LEU A 371	75.909	48.553	26.227	1.00	23.36	C
ATOM	1912	N	ALA A 372	78.607	52.549	28.732	1.00	23.99	N
ATOM	1913	CA	ALA A 372	79.367	53.109	29.844	1.00	24.54	C
ATOM	1914	C	ALA A 372	78.484	53.911	30.774	1.00	26.37	C
ATOM	1915	O	ALA A 372	78.699	53.920	31.984	1.00	26.64	O
ATOM	1916	CB	ALA A 372	80.505	53.989	29.329	1.00	23.23	C
ATOM	1917	N	MET A 373	77.496	54.598	30.207	1.00	26.85	N
ATOM	1918	CA	MET A 373	76.591	55.395	31.017	1.00	26.45	C
ATOM	1919	C	MET A 373	75.617	54.514	31.795	1.00	25.55	C
ATOM	1920	O	MET A 373	74.883	55.009	32.634	1.00	26.24	O
ATOM	1921	CB	MET A 373	75.834	56.402	30.145	1.00	25.35	C
ATOM	1922	CG	MET A 373	76.704	57.547	29.626	1.00	27.17	C
ATOM	1923	SD	MET A 373	75.865	58.517	28.344	1.00	27.74	S



TABLE 2

ATOM	1924	CE	MET A 373	77.157	59.681	27.884	1.00	26.78	C
ATOM	1925	N	GLY A 374	75.603	53.212	31.518	1.00	25.87	N
ATOM	1926	CA	GLY A 374	74.725	52.327	32.269	1.00	24.01	C
ATOM	1927	C	GLY A 374	73.710	51.500	31.506	1.00	24.90	C
ATOM	1928	O	GLY A 374	73.120	50.581	32.073	1.00	26.82	O
ATOM	1929	N	ALA A 375	73.472	51.818	30.241	1.00	23.59	N
ATOM	1930	CA	ALA A 375	72.521	51.035	29.468	1.00	24.75	C
ATOM	1931	C	ALA A 375	73.061	49.611	29.345	1.00	25.43	C
ATOM	1932	O	ALA A 375	74.255	49.411	29.116	1.00	25.89	O
ATOM	1933	CB	ALA A 375	72.325	51.644	28.085	1.00	21.49	C
ATOM	1934	N	ASP A 376	72.182	48.627	29.506	1.00	25.62	N
ATOM	1935	CA	ASP A 376	72.571	47.221	29.406	1.00	26.07	C
ATOM	1936	C	ASP A 376	72.671	46.809	27.945	1.00	25.46	C
ATOM	1937	O	ASP A 376	73.531	46.017	27.573	1.00	25.47	O
ATOM	1938	CB	ASP A 376	71.559	46.355	30.147	1.00	24.89	C
ATOM	1939	CG	ASP A 376	71.472	46.713	31.616	1.00	25.22	C
ATOM	1940	OD1	ASP A 376	72.272	46.174	32.413	1.00	25.77	O
ATOM	1941	OD2	ASP A 376	70.616	47.549	31.971	1.00	25.29	O
ATOM	1942	N	PHE A 377	71.779	47.339	27.117	1.00	26.78	N
ATOM	1943	CA	PHE A 377	71.834	47.053	25.695	1.00	26.93	C
ATOM	1944	C	PHE A 377	71.331	48.236	24.876	1.00	26.74	C
ATOM	1945	O	PHE A 377	70.791	49.205	25.416	1.00	25.26	O
ATOM	1946	CB	PHE A 377	71.108	45.742	25.327	1.00	26.14	C
ATOM	1947	CG	PHE A 377	69.704	45.638	25.836	1.00	28.33	C
ATOM	1948	CD1	PHE A 377	69.451	45.223	27.141	1.00	28.91	C
ATOM	1949	CD2	PHE A 377	68.626	45.898	24.992	1.00	26.99	C
ATOM	1950	CE1	PHE A 377	68.137	45.064	27.597	1.00	29.14	C
ATOM	1951	CE2	PHE A 377	67.316	45.742	25.438	1.00	27.18	C
ATOM	1952	CZ	PHE A 377	67.072	45.323	26.741	1.00	28.12	C
ATOM	1953	N	ILE A 378	71.526	48.150	23.567	1.00	26.27	N
ATOM	1954	CA	ILE A 378	71.188	49.241	22.669	1.00	27.14	C
ATOM	1955	C	ILE A 378	70.242	48.824	21.556	1.00	27.25	C
ATOM	1956	O	ILE A 378	70.423	47.774	20.947	1.00	28.04	O
ATOM	1957	CB	ILE A 378	72.497	49.788	22.032	1.00	27.66	C
ATOM	1958	CG1	ILE A 378	73.491	50.146	23.137	1.00	28.26	C
ATOM	1959	CG2	ILE A 378	72.217	51.011	21.159	1.00	28.62	C
ATOM	1960	CD1	ILE A 378	74.915	50.248	22.644	1.00	30.77	C
ATOM	1961	N	MET A 379	69.226	49.641	21.301	1.00	26.60	N
ATOM	1962	CA	MET A 379	68.293	49.346	20.217	1.00	27.52	C
ATOM	1963	C	MET A 379	68.654	50.271	19.054	1.00	27.68	C
ATOM	1964	O	MET A 379	68.784	51.478	19.232	1.00	26.96	O
ATOM	1965	CB	MET A 379	66.838	49.581	20.645	1.00	26.96	C
ATOM	1966	CG	MET A 379	65.844	49.295	19.524	1.00	28.29	C
ATOM	1967	SD	MET A 379	64.114	49.244	20.007	1.00	26.79	S
ATOM	1968	CE	MET A 379	63.985	47.548	20.606	1.00	27.87	C
ATOM	1969	N	LEU A 380	68.829	49.701	17.868	1.00	29.02	N
ATOM	1970	CA	LEU A 380	69.181	50.503	16.706	1.00	29.48	C
ATOM	1971	C	LEU A 380	68.279	50.225	15.516	1.00	29.03	C
ATOM	1972	O	LEU A 380	67.880	49.086	15.275	1.00	29.34	O
ATOM	1973	CB	LEU A 380	70.642	50.258	16.301	1.00	29.79	C
ATOM	1974	CG	LEU A 380	71.722	50.470	17.368	1.00	30.01	C
ATOM	1975	CD1	LEU A 380	71.783	49.227	18.259	1.00	31.49	C
ATOM	1976	CD2	LEU A 380	73.079	50.693	16.714	1.00	30.65	C
ATOM	1977	N	GLY A 381	67.960	51.283	14.780	1.00	30.37	N
ATOM	1978	CA	GLY A 381	67.122	51.155	13.602	1.00	31.25	C
ATOM	1979	C	GLY A 381	67.941	51.401	12.348	1.00	30.92	C
ATOM	1980	O	GLY A 381	68.210	50.485	11.581	1.00	30.18	O

TABLE 2

ATOM	1981	N	ARG A 382	68.351	52.646	12.147	1.00	33.69	N
ATOM	1982	CA	ARG A 382	69.142	53.014	10.977	1.00	36.36	C
ATOM	1983	C	ARG A 382	70.371	52.125	10.772	1.00	36.33	C
ATOM	1984	O	ARG A 382	70.645	51.681	9.656	1.00	35.82	O
ATOM	1985	CB	ARG A 382	69.585	54.472	11.084	1.00	38.87	C
ATOM	1986	CG	ARG A 382	70.584	54.858	10.023	1.00	45.32	C
ATOM	1987	CD	ARG A 382	71.228	56.211	10.282	1.00	50.37	C
ATOM	1988	NE	ARG A 382	72.434	56.333	9.470	1.00	54.70	N
ATOM	1989	CZ	ARG A 382	73.548	55.638	9.685	1.00	55.84	C
ATOM	1990	NH1	ARG A 382	73.614	54.780	10.700	1.00	56.30	N
ATOM	1991	NH2	ARG A 382	74.582	55.774	8.863	1.00	56.90	N
ATOM	1992	N	TYR A 383	71.109	51.877	11.851	1.00	35.02	N
ATOM	1993	CA	TYR A 383	72.311	51.044	11.808	1.00	33.31	C
ATOM	1994	C	TYR A 383	72.059	49.714	11.093	1.00	32.20	C
ATOM	1995	O	TYR A 383	72.818	49.323	10.209	1.00	32.03	O
ATOM	1996	CB	TYR A 383	72.808	50.781	13.237	1.00	31.93	C
ATOM	1997	CG	TYR A 383	74.023	49.884	13.333	1.00	30.42	C
ATOM	1998	CD1	TYR A 383	75.316	50.413	13.303	1.00	30.08	C
ATOM	1999	CD2	TYR A 383	73.879	48.501	13.445	1.00	29.35	C
ATOM	2000	CE1	TYR A 383	76.431	49.586	13.384	1.00	29.62	C
ATOM	2001	CE2	TYR A 383	74.983	47.665	13.527	1.00	27.30	C
ATOM	2002	CZ	TYR A 383	76.254	48.210	13.495	1.00	29.91	C
ATOM	2003	OH	TYR A 383	77.342	47.373	13.556	1.00	29.92	O
ATOM	2004	N	PHE A 384	70.988	49.029	11.477	1.00	30.96	N
ATOM	2005	CA	PHE A 384	70.635	47.741	10.884	1.00	32.01	C
ATOM	2006	C	PHE A 384	69.907	47.827	9.533	1.00	33.62	C
ATOM	2007	O	PHE A 384	69.951	46.886	8.744	1.00	33.74	O
ATOM	2008	CB	PHE A 384	69.773	46.939	11.862	1.00	30.96	C
ATOM	2009	CG	PHE A 384	70.526	46.421	13.063	1.00	32.53	C
ATOM	2010	CD1	PHE A 384	71.443	45.375	12.931	1.00	29.92	C
ATOM	2011	CD2	PHE A 384	70.301	46.963	14.330	1.00	28.33	C
ATOM	2012	CE1	PHE A 384	72.123	44.874	14.045	1.00	30.70	C
ATOM	2013	CE2	PHE A 384	70.971	46.471	15.444	1.00	30.80	C
ATOM	2014	CZ	PHE A 384	71.886	45.421	15.303	1.00	28.49	C
ATOM	2015	N	ALA A 385	69.234	48.943	9.269	1.00	35.08	N
ATOM	2016	CA	ALA A 385	68.504	49.104	8.010	1.00	36.64	C
ATOM	2017	C	ALA A 385	69.441	49.035	6.805	1.00	38.11	C
ATOM	2018	O	ALA A 385	69.051	48.586	5.731	1.00	38.07	O
ATOM	2019	CB	ALA A 385	67.752	50.429	8.009	1.00	35.59	C
ATOM	2020	N	ARG A 386	70.682	49.475	7.004	1.00	39.97	N
ATOM	2021	CA	ARG A 386	71.701	49.491	5.958	1.00	39.58	C
ATOM	2022	C	ARG A 386	72.150	48.109	5.488	1.00	40.10	C
ATOM	2023	O	ARG A 386	72.819	47.989	4.457	1.00	39.76	O
ATOM	2024	CB	ARG A 386	72.945	50.232	6.449	1.00	40.19	C
ATOM	2025	CG	ARG A 386	72.755	51.685	6.835	1.00	43.04	C
ATOM	2026	CD	ARG A 386	74.036	52.170	7.499	1.00	45.06	C
ATOM	2027	NE	ARG A 386	74.404	51.264	8.585	1.00	46.41	N
ATOM	2028	CZ	ARG A 386	75.644	51.055	9.015	1.00	45.80	C
ATOM	2029	NH1	ARG A 386	76.667	51.690	8.455	1.00	45.90	N
ATOM	2030	NH2	ARG A 386	75.860	50.190	9.996	1.00	44.95	N
ATOM	2031	N	PHE A 387	71.798	47.071	6.238	1.00	40.02	N
ATOM	2032	CA	PHE A 387	72.229	45.726	5.883	1.00	40.37	C
ATOM	2033	C	PHE A 387	71.346	44.966	4.892	1.00	41.94	C
ATOM	2034	O	PHE A 387	70.143	45.207	4.769	1.00	41.59	O
ATOM	2035	CB	PHE A 387	72.417	44.877	7.149	1.00	39.91	C
ATOM	2036	CG	PHE A 387	73.319	45.506	8.183	1.00	40.02	C
ATOM	2037	CD1	PHE A 387	74.411	46.283	7.801	1.00	39.37	C

TABLE 2

ATOM	2038	CD2	PHE	A	387	73.084	45.308	9.544	1.00	39.37	C
ATOM	2039	CE1	PHE	A	387	75.255	46.855	8.755	1.00	40.23	C
ATOM	2040	CE2	PHE	A	387	73.921	45.872	10.510	1.00	38.11	C
ATOM	2041	CZ	PHE	A	387	75.009	46.648	10.117	1.00	39.23	C
ATOM	2042	N	GLU	A	388	71.985	44.040	4.190	1.00	42.30	N
ATOM	2043	CA	GLU	A	388	71.340	43.194	3.200	1.00	42.95	C
ATOM	2044	C	GLU	A	388	70.103	42.530	3.784	1.00	41.98	C
ATOM	2045	O	GLU	A	388	69.080	42.401	3.108	1.00	41.50	O
ATOM	2046	CB	GLU	A	388	72.331	42.118	2.740	1.00	44.78	C
ATOM	2047	CG	GLU	A	388	71.786	41.096	1.749	1.00	48.50	C
ATOM	2048	CD	GLU	A	388	71.457	41.708	0.400	1.00	51.34	C
ATOM	2049	OE1	GLU	A	388	72.306	42.458	-0.130	1.00	52.78	O
ATOM	2050	OE2	GLU	A	388	70.359	41.435	-0.134	1.00	53.13	O
ATOM	2051	N	GLU	A	389	70.200	42.128	5.049	1.00	40.73	N
ATOM	2052	CA	GLU	A	389	69.107	41.441	5.722	1.00	39.64	C
ATOM	2053	C	GLU	A	389	67.884	42.266	6.125	1.00	38.63	C
ATOM	2054	O	GLU	A	389	66.879	41.699	6.541	1.00	38.65	O
ATOM	2055	CB	GLU	A	389	69.648	40.678	6.937	1.00	39.65	C
ATOM	2056	CG	GLU	A	389	70.631	39.577	6.567	1.00	39.31	C
ATOM	2057	CD	GLU	A	389	72.088	39.993	6.699	1.00	39.13	C
ATOM	2058	OE1	GLU	A	389	72.409	41.184	6.511	1.00	37.80	O
ATOM	2059	OE2	GLU	A	389	72.924	39.112	6.982	1.00	38.72	O
ATOM	2060	N	SER	A	390	67.951	43.589	6.020	1.00	38.90	N
ATOM	2061	CA	SER	A	390	66.783	44.398	6.362	1.00	42.49	C
ATOM	2062	C	SER	A	390	65.734	44.108	5.276	1.00	44.51	C
ATOM	2063	O	SER	A	390	66.069	44.008	4.092	1.00	44.30	O
ATOM	2064	CB	SER	A	390	67.130	45.886	6.393	1.00	41.33	C
ATOM	2065	OG	SER	A	390	67.521	46.348	5.116	1.00	46.43	O
ATOM	2066	N	PRO	A	391	64.454	43.985	5.669	1.00	45.30	N
ATOM	2067	CA	PRO	A	391	63.317	43.691	4.785	1.00	47.36	C
ATOM	2068	C	PRO	A	391	62.956	44.730	3.725	1.00	48.75	C
ATOM	2069	O	PRO	A	391	61.909	44.625	3.089	1.00	50.35	O
ATOM	2070	CB	PRO	A	391	62.176	43.478	5.775	1.00	46.19	C
ATOM	2071	CG	PRO	A	391	62.473	44.525	6.804	1.00	44.91	C
ATOM	2072	CD	PRO	A	391	63.975	44.374	7.010	1.00	44.19	C
ATOM	2073	N	THR	A	392	63.806	45.727	3.529	1.00	49.99	N
ATOM	2074	CA	THR	A	392	63.507	46.755	2.549	1.00	51.23	C
ATOM	2075	C	THR	A	392	64.213	46.535	1.217	1.00	53.82	C
ATOM	2076	O	THR	A	392	65.077	45.665	1.083	1.00	54.85	O
ATOM	2077	CB	THR	A	392	63.863	48.152	3.084	1.00	49.99	C
ATOM	2078	OG1	THR	A	392	65.261	48.209	3.375	1.00	50.17	O
ATOM	2079	CG2	THR	A	392	63.070	48.450	4.351	1.00	49.74	C
ATOM	2080	N	ARG	A	393	63.835	47.336	0.230	1.00	55.66	N
ATOM	2081	CA	ARG	A	393	64.407	47.224	-1.098	1.00	58.14	C
ATOM	2082	C	ARG	A	393	65.744	47.930	-1.238	1.00	58.48	C
ATOM	2083	O	ARG	A	393	65.950	49.023	-0.709	1.00	57.12	O
ATOM	2084	CB	ARG	A	393	63.419	47.766	-2.134	1.00	59.64	C
ATOM	2085	CG	ARG	A	393	62.178	46.895	-2.315	1.00	62.55	C
ATOM	2086	CD	ARG	A	393	61.092	47.637	-3.073	1.00	64.17	C
ATOM	2087	NE	ARG	A	393	61.646	48.361	-4.210	1.00	65.75	N
ATOM	2088	CZ	ARG	A	393	61.462	49.659	-4.423	1.00	67.27	C
ATOM	2089	NH1	ARG	A	393	60.732	50.372	-3.576	1.00	66.89	N
ATOM	2090	NH2	ARG	A	393	62.024	50.248	-5.472	1.00	68.47	N
ATOM	2091	N	LYS	A	394	66.650	47.276	-1.957	1.00	59.95	N
ATOM	2092	CA	LYS	A	394	67.979	47.805	-2.217	1.00	61.71	C
ATOM	2093	C	LYS	A	394	67.835	48.647	-3.479	1.00	63.80	C
ATOM	2094	O	LYS	A	394	67.576	48.116	-4.555	1.00	64.78	O

TABLE 2

ATOM	2095	CB	LYS A 394	68.953	46.652	-2.456	1.00	59.47	C
ATOM	2096	CG	LYS A 394	70.408	47.017	-2.271	1.00	57.65	C
ATOM	2097	CD	LYS A 394	71.316	45.886	-2.715	1.00	56.24	C
ATOM	2098	CE	LYS A 394	71.039	44.606	-1.958	1.00	54.65	C
ATOM	2099	NZ	LYS A 394	71.894	43.500	-2.462	1.00	53.21	N
ATOM	2100	N	VAL A 395	67.994	49.959	-3.343	1.00	66.61	N
ATOM	2101	CA	VAL A 395	67.840	50.863	-4.474	1.00	69.32	C
ATOM	2102	C	VAL A 395	69.118	51.577	-4.896	1.00	71.12	C
ATOM	2103	O	VAL A 395	69.663	52.384	-4.145	1.00	71.80	O
ATOM	2104	CB	VAL A 395	66.775	51.935	-4.168	1.00	69.81	C
ATOM	2105	CG1	VAL A 395	66.653	52.901	-5.338	1.00	71.62	C
ATOM	2106	CG2	VAL A 395	65.438	51.270	-3.884	1.00	70.98	C
ATOM	2107	N	THR A 396	69.581	51.287	-6.109	1.00	73.05	N
ATOM	2108	CA	THR A 396	70.783	51.921	-6.644	1.00	74.05	C
ATOM	2109	C	THR A 396	70.409	53.303	-7.163	1.00	74.87	C
ATOM	2110	O	THR A 396	69.793	53.428	-8.222	1.00	75.03	O
ATOM	2111	CB	THR A 396	71.381	51.106	-7.804	1.00	74.00	C
ATOM	2112	OG1	THR A 396	71.715	49.791	-7.343	1.00	74.43	O
ATOM	2113	CG2	THR A 396	72.638	51.781	-8.336	1.00	74.35	C
ATOM	2114	N	ILE A 397	70.784	54.335	-6.415	1.00	75.83	N
ATOM	2115	CA	ILE A 397	70.472	55.710	-6.788	1.00	76.89	C
ATOM	2116	C	ILE A 397	71.681	56.521	-7.251	1.00	77.53	C
ATOM	2117	O	ILE A 397	72.537	56.897	-6.449	1.00	77.96	O
ATOM	2118	CB	ILE A 397	69.817	56.466	-5.612	1.00	77.21	C
ATOM	2119	CG1	ILE A 397	68.525	55.761	-5.196	1.00	77.37	C
ATOM	2120	CG2	ILE A 397	69.538	57.911	-6.010	1.00	76.96	C
ATOM	2121	CD1	ILE A 397	67.820	56.415	-4.025	1.00	78.15	C
ATOM	2122	N	ASN A 398	71.736	56.793	-8.551	1.00	78.03	N
ATOM	2123	CA	ASN A 398	72.814	57.583	-9.131	1.00	77.85	C
ATOM	2124	C	ASN A 398	74.200	57.051	-8.758	1.00	76.64	C
ATOM	2125	O	ASN A 398	75.036	57.787	-8.229	1.00	76.51	O
ATOM	2126	CB	ASN A 398	72.667	59.042	-8.679	1.00	79.57	C
ATOM	2127	CG	ASN A 398	73.387	60.019	-9.595	1.00	82.07	C
ATOM	2128	OD1	ASN A 398	74.617	60.007	-9.700	1.00	83.51	O
ATOM	2129	ND2	ASN A 398	72.618	60.874	-10.266	1.00	82.25	N
ATOM	2130	N	GLY A 399	74.434	55.768	-9.026	1.00	75.00	N
ATOM	2131	CA	GLY A 399	75.724	55.165	-8.730	1.00	72.65	C
ATOM	2132	C	GLY A 399	75.916	54.587	-7.336	1.00	71.38	C
ATOM	2133	O	GLY A 399	76.745	53.695	-7.143	1.00	71.58	O
ATOM	2134	N	SER A 400	75.163	55.087	-6.361	1.00	69.39	N
ATOM	2135	CA	SER A 400	75.283	54.609	-4.985	1.00	66.71	C
ATOM	2136	C	SER A 400	74.121	53.723	-4.565	1.00	64.95	C
ATOM	2137	O	SER A 400	72.958	54.084	-4.734	1.00	65.32	O
ATOM	2138	CB	SER A 400	75.381	55.794	-4.023	1.00	66.11	C
ATOM	2139	OG	SER A 400	76.546	56.557	-4.273	1.00	66.69	O
ATOM	2140	N	VAL A 401	74.440	52.561	-4.011	1.00	62.49	N
ATOM	2141	CA	VAL A 401	73.412	51.639	-3.557	1.00	60.52	C
ATOM	2142	C	VAL A 401	72.905	52.092	-2.190	1.00	60.36	C
ATOM	2143	O	VAL A 401	73.689	52.313	-1.261	1.00	60.61	O
ATOM	2144	CB	VAL A 401	73.960	50.203	-3.453	1.00	59.89	C
ATOM	2145	CG1	VAL A 401	72.869	49.261	-2.978	1.00	58.28	C
ATOM	2146	CG2	VAL A 401	74.496	49.758	-4.805	1.00	59.96	C
ATOM	2147	N	MET A 402	71.588	52.237	-2.079	1.00	58.65	N
ATOM	2148	CA	MET A 402	70.957	52.672	-0.841	1.00	56.16	C
ATOM	2149	C	MET A 402	69.885	51.671	-0.435	1.00	54.18	C
ATOM	2150	O	MET A 402	69.568	50.747	-1.186	1.00	53.12	O
ATOM	2151	CB	MET A 402	70.297	54.038	-1.038	1.00	58.26	C

TABLE 2

ATOM	2152	CG	MET A 402	71.168	55.081	-1.713	1.00	59.17	C
ATOM	2153	SD	MET A 402	72.561	55.584	-0.705	1.00	63.98	S
ATOM	2154	CE	MET A 402	71.781	56.836	0.332	1.00	60.67	C
ATOM	2155	N	LYS A 403	69.340	51.856	0.764	1.00	51.25	N
ATOM	2156	CA	LYS A 403	68.267	51.007	1.267	1.00	48.15	C
ATOM	2157	C	LYS A 403	67.185	51.913	1.828	1.00	47.01	C
ATOM	2158	O	LYS A 403	67.473	52.981	2.369	1.00	46.14	O
ATOM	2159	CB	LYS A 403	68.760	50.049	2.357	1.00	47.38	C
ATOM	2160	CG	LYS A 403	69.675	48.948	1.850	1.00	46.96	C
ATOM	2161	CD	LYS A 403	69.389	47.602	2.514	1.00	46.69	C
ATOM	2162	CE	LYS A 403	68.052	47.027	2.054	1.00	45.74	C
ATOM	2163	NZ	LYS A 403	67.823	45.633	2.534	1.00	43.06	N
ATOM	2164	N	GLU A 404	65.937	51.491	1.683	1.00	46.11	N
ATOM	2165	CA	GLU A 404	64.817	52.276	2.171	1.00	46.13	C
ATOM	2166	C	GLU A 404	64.767	52.246	3.689	1.00	44.64	C
ATOM	2167	O	GLU A 404	65.107	51.243	4.316	1.00	43.82	O
ATOM	2168	CB	GLU A 404	63.506	51.725	1.616	1.00	47.95	C
ATOM	2169	CG	GLU A 404	63.453	51.663	0.101	1.00	52.21	C
ATOM	2170	CD	GLU A 404	62.145	51.099	-0.405	1.00	53.46	C
ATOM	2171	OE1	GLU A 404	61.875	49.900	-0.160	1.00	54.61	O
ATOM	2172	OE2	GLU A 404	61.386	51.860	-1.042	1.00	54.88	O
ATOM	2173	N	TYR A 405	64.336	53.354	4.272	1.00	43.31	N
ATOM	2174	CA	TYR A 405	64.228	53.454	5.714	1.00	42.00	C
ATOM	2175	C	TYR A 405	63.190	54.501	6.056	1.00	40.73	C
ATOM	2176	O	TYR A 405	63.323	55.662	5.688	1.00	41.74	O
ATOM	2177	CB	TYR A 405	65.577	53.837	6.328	1.00	41.52	C
ATOM	2178	CG	TYR A 405	65.571	53.885	7.839	1.00	40.73	C
ATOM	2179	CD1	TYR A 405	65.154	52.787	8.588	1.00	39.95	C
ATOM	2180	CD2	TYR A 405	66.002	55.020	8.521	1.00	40.92	C
ATOM	2181	CE1	TYR A 405	65.167	52.817	9.983	1.00	40.74	C
ATOM	2182	CE2	TYR A 405	66.019	55.061	9.913	1.00	40.89	C
ATOM	2183	CZ	TYR A 405	65.599	53.957	10.637	1.00	40.10	C
ATOM	2184	OH	TYR A 405	65.596	54.003	12.011	1.00	39.70	O
ATOM	2185	N	TRP A 406	62.150	54.082	6.760	1.00	39.11	N
ATOM	2186	CA	TRP A 406	61.091	54.993	7.153	1.00	37.83	C
ATOM	2187	C	TRP A 406	60.708	54.695	8.594	1.00	36.75	C
ATOM	2188	O	TRP A 406	60.862	53.566	9.057	1.00	36.18	O
ATOM	2189	CB	TRP A 406	59.887	54.829	6.209	1.00	34.87	C
ATOM	2190	CG	TRP A 406	59.258	53.464	6.225	1.00	32.13	C
ATOM	2191	CD1	TRP A 406	58.274	53.030	7.061	1.00	31.21	C
ATOM	2192	CD2	TRP A 406	59.574	52.357	5.371	1.00	31.79	C
ATOM	2193	NE1	TRP A 406	57.954	51.729	6.784	1.00	31.89	N
ATOM	2194	CE2	TRP A 406	58.736	51.287	5.752	1.00	31.65	C
ATOM	2195	CE3	TRP A 406	60.483	52.165	4.322	1.00	32.48	C
ATOM	2196	CZ2	TRP A 406	58.776	50.034	5.119	1.00	32.31	C
ATOM	2197	CZ3	TRP A 406	60.524	50.915	3.690	1.00	33.57	C
ATOM	2198	CH2	TRP A 406	59.674	49.869	4.094	1.00	32.43	C
ATOM	2199	N	GLY A 407	60.229	55.717	9.298	1.00	37.66	N
ATOM	2200	CA	GLY A 407	59.835	55.554	10.685	1.00	38.09	C
ATOM	2201	C	GLY A 407	58.446	54.963	10.858	1.00	39.18	C
ATOM	2202	O	GLY A 407	57.629	54.993	9.939	1.00	38.93	O
ATOM	2203	N	GLU A 408	58.183	54.419	12.042	1.00	39.46	N
ATOM	2204	CA	GLU A 408	56.888	53.822	12.350	1.00	40.78	C
ATOM	2205	C	GLU A 408	55.792	54.880	12.425	1.00	42.44	C
ATOM	2206	O	GLU A 408	54.607	54.563	12.370	1.00	43.17	O
ATOM	2207	CB	GLU A 408	56.963	53.062	13.674	1.00	39.22	C
ATOM	2208	CG	GLU A 408	57.763	51.777	13.589	1.00	37.81	C

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ATOM	2209	CD	GLU A 408	57.106	50.743	12.681	1.00	37.71	C
ATOM	2210	OE1	GLU A 408	56.007	50.266	13.022	1.00	37.89	O
ATOM	2211	OE2	GLU A 408	57.685	50.408	11.628	1.00	37.24	O
ATOM	2212	N	GLY A 409	56.200	56.139	12.543	1.00	44.48	N
ATOM	2213	CA	GLY A 409	55.242	57.227	12.623	1.00	46.13	C
ATOM	2214	C	GLY A 409	54.866	57.805	11.269	1.00	47.54	C
ATOM	2215	O	GLY A 409	53.909	58.566	11.166	1.00	47.48	O
ATOM	2216	N	SER A 410	55.611	57.450	10.227	1.00	49.11	N
ATOM	2217	CA	SER A 410	55.316	57.956	8.893	1.00	51.17	C
ATOM	2218	C	SER A 410	54.028	57.319	8.381	1.00	53.44	C
ATOM	2219	O	SER A 410	53.676	56.205	8.777	1.00	52.20	O
ATOM	2220	CB	SER A 410	56.465	57.646	7.928	1.00	50.64	C
ATOM	2221	OG	SER A 410	56.489	56.273	7.580	1.00	52.23	O
ATOM	2222	N	SER A 411	53.328	58.033	7.503	1.00	55.87	N
ATOM	2223	CA	SER A 411	52.074	57.547	6.937	1.00	58.48	C
ATOM	2224	C	SER A 411	52.303	56.253	6.170	1.00	59.75	C
ATOM	2225	O	SER A 411	51.425	55.393	6.100	1.00	59.90	O
ATOM	2226	CB	SER A 411	51.481	58.605	6.006	1.00	59.49	C
ATOM	2227	OG	SER A 411	52.433	59.025	5.042	1.00	60.32	O
ATOM	2228	N	ARG A 412	53.498	56.122	5.605	1.00	61.10	N
ATOM	2229	CA	ARG A 412	53.867	54.939	4.841	1.00	62.63	C
ATOM	2230	C	ARG A 412	53.824	53.667	5.686	1.00	64.23	C
ATOM	2231	O	ARG A 412	54.057	52.572	5.177	1.00	63.68	O
ATOM	2232	CB	ARG A 412	55.273	55.114	4.254	1.00	60.98	C
ATOM	2233	CG	ARG A 412	55.772	53.904	3.483	1.00	59.74	C
ATOM	2234	CD	ARG A 412	57.137	54.136	2.871	1.00	58.42	C
ATOM	2235	NE	ARG A 412	57.566	52.982	2.086	1.00	57.23	N
ATOM	2236	CZ	ARG A 412	58.706	52.918	1.406	1.00	57.66	C
ATOM	2237	NH1	ARG A 412	59.547	53.944	1.409	1.00	56.64	N
ATOM	2238	NH2	ARG A 412	59.002	51.825	0.718	1.00	58.20	N
ATOM	2239	N	ALA A 413	53.514	53.806	6.972	1.00	67.55	N
ATOM	2240	CA	ALA A 413	53.480	52.643	7.851	1.00	70.19	C
ATOM	2241	C	ALA A 413	52.367	52.630	8.894	1.00	72.70	C
ATOM	2242	O	ALA A 413	51.812	51.573	9.189	1.00	72.87	O
ATOM	2243	CB	ALA A 413	54.828	52.496	8.548	1.00	70.18	C
ATOM	2244	N	ARG A 414	52.045	53.794	9.456	1.00	76.29	N
ATOM	2245	CA	ARG A 414	51.020	53.864	10.492	1.00	79.14	C
ATOM	2246	C	ARG A 414	49.605	53.528	10.021	1.00	80.91	C
ATOM	2247	O	ARG A 414	48.799	53.012	10.803	1.00	80.83	O
ATOM	2248	CB	ARG A 414	51.033	55.237	11.184	1.00	79.31	C
ATOM	2249	CG	ARG A 414	50.589	56.425	10.341	1.00	80.51	C
ATOM	2250	CD	ARG A 414	50.376	57.644	11.245	1.00	81.22	C
ATOM	2251	NE	ARG A 414	49.912	58.836	10.532	1.00	81.34	N
ATOM	2252	CZ	ARG A 414	50.676	59.603	9.757	1.00	81.51	C
ATOM	2253	NH1	ARG A 414	51.959	59.310	9.583	1.00	80.79	N
ATOM	2254	NH2	ARG A 414	50.158	60.671	9.161	1.00	80.72	N
ATOM	2255	N	ASN A 415	49.294	53.814	8.758	1.00	81.82	N
ATOM	2256	CA	ASN A 415	47.965	53.499	8.240	1.00	83.15	C
ATOM	2257	C	ASN A 415	47.967	52.029	7.797	1.00	83.41	C
ATOM	2258	O	ASN A 415	47.862	51.733	6.602	1.00	84.28	O
ATOM	2259	CB	ASN A 415	47.598	54.394	7.036	1.00	83.73	C
ATOM	2260	CG	ASN A 415	47.997	55.861	7.227	1.00	84.65	C
ATOM	2261	OD1	ASN A 415	47.436	56.589	8.076	1.00	84.65	O
ATOM	2262	ND2	ASN A 415	48.969	56.310	6.429	1.00	85.41	N
ATOM	2263	N	TRP A 416	48.101	51.116	8.758	1.00	82.63	N
ATOM	2264	CA	TRP A 416	48.118	49.682	8.465	1.00	82.02	C
ATOM	2265	C	TRP A 416	46.776	49.027	8.809	1.00	82.01	C

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ATOM	2266	O	TRP	A	416	46.228	49.228	9.896	1.00	82.27	O
ATOM	2267	CB	TRP	A	416	49.268	48.998	9.236	1.00	79.66	C
ATOM	2268	CG	TRP	A	416	48.850	47.849	10.126	1.00	77.46	C
ATOM	2269	CD1	TRP	A	416	48.380	46.627	9.731	1.00	76.95	C
ATOM	2270	CD2	TRP	A	416	48.806	47.849	11.560	1.00	76.39	C
ATOM	2271	NE1	TRP	A	416	48.040	45.871	10.828	1.00	75.11	N
ATOM	2272	CE2	TRP	A	416	48.290	46.595	11.963	1.00	75.43	C
ATOM	2273	CE3	TRP	A	416	49.149	48.788	12.544	1.00	75.87	C
ATOM	2274	CZ2	TRP	A	416	48.107	46.256	13.309	1.00	75.55	C
ATOM	2275	CZ3	TRP	A	416	48.965	48.449	13.884	1.00	76.10	C
ATOM	2276	CH2	TRP	A	416	48.448	47.193	14.251	1.00	75.60	C
ATOM	2277	N	PHE	A	429	48.725	67.124	8.023	1.00	82.88	N
ATOM	2278	CA	PHE	A	429	49.810	67.001	8.991	1.00	82.94	C
ATOM	2279	C	PHE	A	429	50.394	65.588	8.957	1.00	82.92	C
ATOM	2280	O	PHE	A	429	49.681	64.621	8.683	1.00	82.79	O
ATOM	2281	CB	PHE	A	429	49.292	67.335	10.408	1.00	83.53	C
ATOM	2282	CG	PHE	A	429	48.135	66.455	10.870	1.00	83.27	C
ATOM	2283	CD1	PHE	A	429	48.310	65.082	11.041	1.00	82.47	C
ATOM	2284	CD2	PHE	A	429	46.883	67.010	11.141	1.00	82.83	C
ATOM	2285	CE1	PHE	A	429	47.263	64.261	11.473	1.00	81.70	C
ATOM	2286	CE2	PHE	A	429	45.819	66.202	11.580	1.00	82.89	C
ATOM	2287	CZ	PHE	A	429	46.014	64.819	11.745	1.00	82.38	C
ATOM	2288	N	GLU	A	430	51.693	65.468	9.221	1.00	82.60	N
ATOM	2289	CA	GLU	A	430	52.327	64.157	9.229	1.00	82.03	C
ATOM	2290	C	GLU	A	430	53.060	63.870	10.528	1.00	81.40	C
ATOM	2291	O	GLU	A	430	53.285	64.769	11.340	1.00	81.74	O
ATOM	2292	CB	GLU	A	430	53.302	64.011	8.069	1.00	80.59	C
ATOM	2293	CG	GLU	A	430	53.725	62.546	7.846	1.00	80.58	C
ATOM	2294	CD	GLU	A	430	54.143	62.283	6.421	1.00	79.33	C
ATOM	2295	OE1	GLU	A	430	55.063	62.985	5.936	1.00	79.26	O
ATOM	2296	OE2	GLU	A	430	53.547	61.382	5.773	1.00	78.51	O
ATOM	2297	N	GLU	A	431	53.456	62.614	10.712	1.00	79.43	N
ATOM	2298	CA	GLU	A	431	54.133	62.214	11.941	1.00	77.44	C
ATOM	2299	C	GLU	A	431	55.365	61.338	11.724	1.00	75.89	C
ATOM	2300	O	GLU	A	431	55.739	60.568	12.606	1.00	75.77	O
ATOM	2301	CB	GLU	A	431	53.129	61.482	12.841	1.00	76.96	C
ATOM	2302	CG	GLU	A	431	51.677	61.970	12.631	1.00	76.64	C
ATOM	2303	CD	GLU	A	431	50.767	61.647	13.795	1.00	77.02	C
ATOM	2304	OE1	GLU	A	431	50.818	60.496	14.301	1.00	76.77	O
ATOM	2305	OE2	GLU	A	431	49.984	62.546	14.214	1.00	77.41	O
ATOM	2306	N	GLY	A	432	56.000	61.462	10.562	1.00	74.32	N
ATOM	2307	CA	GLY	A	432	57.179	60.660	10.297	1.00	72.21	C
ATOM	2308	C	GLY	A	432	57.936	61.058	9.047	1.00	70.77	C
ATOM	2309	O	GLY	A	432	57.540	61.985	8.337	1.00	71.05	O
ATOM	2310	N	VAL	A	433	59.032	60.352	8.776	1.00	68.86	N
ATOM	2311	CA	VAL	A	433	59.855	60.629	7.603	1.00	66.42	C
ATOM	2312	C	VAL	A	433	60.245	59.353	6.852	1.00	64.76	C
ATOM	2313	O	VAL	A	433	60.353	58.275	7.442	1.00	63.75	O
ATOM	2314	CB	VAL	A	433	61.139	61.397	7.998	1.00	66.53	C
ATOM	2315	CG1	VAL	A	433	60.776	62.757	8.567	1.00	66.43	C
ATOM	2316	CG2	VAL	A	433	61.928	60.600	9.016	1.00	66.47	C
ATOM	2317	N	ASP	A	434	60.445	59.498	5.544	1.00	62.35	N
ATOM	2318	CA	ASP	A	434	60.824	58.399	4.656	1.00	60.25	C
ATOM	2319	C	ASP	A	434	62.173	58.780	4.052	1.00	58.31	C
ATOM	2320	O	ASP	A	434	62.333	59.891	3.549	1.00	58.55	O
ATOM	2321	CB	ASP	A	434	59.780	58.260	3.539	1.00	61.48	C
ATOM	2322	CG	ASP	A	434	59.952	56.994	2.715	1.00	62.63	C

TABLE 2

ATOM	2323	OD1	ASP	A	434	61.091	56.500	2.578	1.00	65.25	O
ATOM	2324	OD2	ASP	A	434	58.936	56.499	2.186	1.00	63.34	O
ATOM	2325	N	SER	A	435	63.143	57.873	4.095	1.00	55.86	N
ATOM	2326	CA	SER	A	435	64.459	58.182	3.548	1.00	53.85	C
ATOM	2327	C	SER	A	435	65.260	56.977	3.069	1.00	51.23	C
ATOM	2328	O	SER	A	435	64.753	55.859	2.996	1.00	50.16	O
ATOM	2329	CB	SER	A	435	65.279	58.952	4.583	1.00	53.87	C
ATOM	2330	OG	SER	A	435	65.363	58.220	5.792	1.00	56.33	O
ATOM	2331	N	TYR	A	436	66.523	57.230	2.744	1.00	49.98	N
ATOM	2332	CA	TYR	A	436	67.436	56.203	2.263	1.00	49.61	C
ATOM	2333	C	TYR	A	436	68.712	56.158	3.104	1.00	48.71	C
ATOM	2334	O	TYR	A	436	69.174	57.187	3.602	1.00	48.91	O
ATOM	2335	CB	TYR	A	436	67.817	56.485	0.806	1.00	51.63	C
ATOM	2336	CG	TYR	A	436	66.691	56.313	-0.188	1.00	52.47	C
ATOM	2337	CD1	TYR	A	436	66.256	55.044	-0.562	1.00	52.86	C
ATOM	2338	CD2	TYR	A	436	66.058	57.420	-0.752	1.00	54.05	C
ATOM	2339	CE1	TYR	A	436	65.219	54.878	-1.475	1.00	55.19	C
ATOM	2340	CE2	TYR	A	436	65.015	57.267	-1.668	1.00	55.67	C
ATOM	2341	CZ	TYR	A	436	64.602	55.992	-2.023	1.00	55.33	C
ATOM	2342	OH	TYR	A	436	63.569	55.825	-2.916	1.00	57.47	O
ATOM	2343	N	VAL	A	437	69.272	54.963	3.263	1.00	45.78	N
ATOM	2344	CA	VAL	A	437	70.514	54.794	4.008	1.00	44.47	C
ATOM	2345	C	VAL	A	437	71.501	54.059	3.114	1.00	44.14	C
ATOM	2346	O	VAL	A	437	71.120	53.167	2.357	1.00	43.85	O
ATOM	2347	CB	VAL	A	437	70.318	53.984	5.316	1.00	43.82	C
ATOM	2348	CG1	VAL	A	437	69.389	54.736	6.255	1.00	42.73	C
ATOM	2349	CG2	VAL	A	437	69.778	52.598	5.004	1.00	41.37	C
ATOM	2350	N	PRO	A	438	72.788	54.429	3.186	1.00	44.43	N
ATOM	2351	CA	PRO	A	438	73.798	53.770	2.352	1.00	43.91	C
ATOM	2352	C	PRO	A	438	73.930	52.285	2.654	1.00	43.14	C
ATOM	2353	O	PRO	A	438	73.975	51.883	3.816	1.00	43.63	O
ATOM	2354	CB	PRO	A	438	75.073	54.556	2.667	1.00	44.21	C
ATOM	2355	CG	PRO	A	438	74.849	55.003	4.085	1.00	44.54	C
ATOM	2356	CD	PRO	A	438	73.403	55.436	4.070	1.00	43.37	C
ATOM	2357	N	TYR	A	439	73.971	51.480	1.597	1.00	42.30	N
ATOM	2358	CA	TYR	A	439	74.103	50.034	1.713	1.00	41.24	C
ATOM	2359	C	TYR	A	439	75.441	49.711	2.362	1.00	42.01	C
ATOM	2360	O	TYR	A	439	76.477	50.233	1.956	1.00	41.44	O
ATOM	2361	CB	TYR	A	439	74.025	49.391	0.323	1.00	39.97	C
ATOM	2362	CG	TYR	A	439	74.174	47.884	0.302	1.00	37.05	C
ATOM	2363	CD1	TYR	A	439	73.341	47.067	1.063	1.00	37.13	C
ATOM	2364	CD2	TYR	A	439	75.134	47.273	-0.506	1.00	38.06	C
ATOM	2365	CE1	TYR	A	439	73.458	45.675	1.019	1.00	37.56	C
ATOM	2366	CE2	TYR	A	439	75.260	45.887	-0.557	1.00	36.89	C
ATOM	2367	CZ	TYR	A	439	74.419	45.094	0.206	1.00	38.34	C
ATOM	2368	OH	TYR	A	439	74.544	43.723	0.158	1.00	39.52	O
ATOM	2369	N	ALA	A	440	75.415	48.841	3.366	1.00	42.74	N
ATOM	2370	CA	ALA	A	440	76.632	48.473	4.078	1.00	42.66	C
ATOM	2371	C	ALA	A	440	76.991	47.007	3.907	1.00	42.37	C
ATOM	2372	O	ALA	A	440	77.982	46.540	4.462	1.00	43.02	O
ATOM	2373	CB	ALA	A	440	76.480	48.799	5.561	1.00	42.72	C
ATOM	2374	N	GLY	A	441	76.190	46.282	3.139	1.00	41.94	N
ATOM	2375	CA	GLY	A	441	76.465	44.872	2.940	1.00	41.40	C
ATOM	2376	C	GLY	A	441	75.788	44.014	3.991	1.00	42.16	C
ATOM	2377	O	GLY	A	441	74.776	44.410	4.568	1.00	42.14	O
ATOM	2378	N	LYS	A	442	76.351	42.838	4.246	1.00	42.68	N
ATOM	2379	CA	LYS	A	442	75.799	41.909	5.225	1.00	42.67	C



ATOM	2380	C	LYS	A	442	76.048	42.345	6.675	1.00	41.33	C
ATOM	2381	O	LYS	A	442	77.086	42.924	7.000	1.00	39.63	O
ATOM	2382	CB	LYS	A	442	76.384	40.515	4.990	1.00	45.23	C
ATOM	2383	CG	LYS	A	442	76.063	39.949	3.612	1.00	49.35	C
ATOM	2384	CD	LYS	A	442	74.990	38.864	3.670	1.00	51.07	C
ATOM	2385	CE	LYS	A	442	75.563	37.563	4.226	1.00	54.09	C
ATOM	2386	NZ	LYS	A	442	74.589	36.429	4.216	1.00	55.56	N
ATOM	2387	N	LEU	A	443	75.078	42.055	7.534	1.00	40.11	N
ATOM	2388	CA	LEU	A	443	75.140	42.395	8.951	1.00	38.38	C
ATOM	2389	C	LEU	A	443	76.422	41.932	9.657	1.00	38.75	C
ATOM	2390	O	LEU	A	443	77.085	42.717	10.329	1.00	36.60	O
ATOM	2391	CB	LEU	A	443	73.917	41.805	9.659	1.00	35.66	C
ATOM	2392	CG	LEU	A	443	73.769	41.987	11.173	1.00	34.22	C
ATOM	2393	CD1	LEU	A	443	72.311	41.806	11.567	1.00	31.06	C
ATOM	2394	CD2	LEU	A	443	74.660	40.991	11.904	1.00	33.38	C
ATOM	2395	N	LYS	A	444	76.763	40.659	9.489	1.00	39.50	N
ATOM	2396	CA	LYS	A	444	77.939	40.065	10.125	1.00	42.18	C
ATOM	2397	C	LYS	A	444	79.232	40.890	10.156	1.00	41.66	C
ATOM	2398	O	LYS	A	444	79.745	41.200	11.229	1.00	42.08	O
ATOM	2399	CB	LYS	A	444	78.237	38.702	9.493	1.00	43.45	C
ATOM	2400	CG	LYS	A	444	79.237	37.878	10.285	1.00	48.67	C
ATOM	2401	CD	LYS	A	444	79.460	36.511	9.663	1.00	51.53	C
ATOM	2402	CE	LYS	A	444	80.285	35.630	10.585	1.00	52.97	C
ATOM	2403	NZ	LYS	A	444	81.600	36.254	10.907	1.00	53.80	N
ATOM	2404	N	ASP	A	445	79.757	41.240	8.988	1.00	41.15	N
ATOM	2405	CA	ASP	A	445	81.005	41.991	8.901	1.00	41.12	C
ATOM	2406	C	ASP	A	445	80.951	43.355	9.567	1.00	40.48	C
ATOM	2407	O	ASP	A	445	81.936	43.810	10.149	1.00	39.71	O
ATOM	2408	CB	ASP	A	445	81.412	42.164	7.436	1.00	44.73	C
ATOM	2409	CG	ASP	A	445	81.511	40.841	6.698	1.00	47.59	C
ATOM	2410	OD1	ASP	A	445	82.364	40.008	7.077	1.00	48.96	O
ATOM	2411	OD2	ASP	A	445	80.726	40.636	5.746	1.00	50.74	O
ATOM	2412	N	ASN	A	446	79.802	44.012	9.471	1.00	38.11	N
ATOM	2413	CA	ASN	A	446	79.637	45.332	10.058	1.00	37.61	C
ATOM	2414	C	ASN	A	446	79.543	45.289	11.579	1.00	37.06	C
ATOM	2415	O	ASN	A	446	80.122	46.136	12.261	1.00	35.82	O
ATOM	2416	CB	ASN	A	446	78.405	46.000	9.469	1.00	38.33	C
ATOM	2417	CG	ASN	A	446	78.605	46.388	8.023	1.00	39.42	C
ATOM	2418	OD1	ASN	A	446	79.106	47.473	7.725	1.00	39.50	O
ATOM	2419	ND2	ASN	A	446	78.232	45.493	7.112	1.00	38.24	N
ATOM	2420	N	VAL	A	447	78.815	44.309	12.106	1.00	35.62	N
ATOM	2421	CA	VAL	A	447	78.676	44.165	13.547	1.00	36.21	C
ATOM	2422	C	VAL	A	447	80.030	43.786	14.160	1.00	36.80	C
ATOM	2423	O	VAL	A	447	80.419	44.314	15.199	1.00	36.29	O
ATOM	2424	CB	VAL	A	447	77.629	43.087	13.901	1.00	35.55	C
ATOM	2425	CG1	VAL	A	447	77.741	42.707	15.373	1.00	34.78	C
ATOM	2426	CG2	VAL	A	447	76.229	43.612	13.598	1.00	34.46	C
ATOM	2427	N	GLU	A	448	80.746	42.876	13.505	1.00	37.04	N
ATOM	2428	CA	GLU	A	448	82.048	42.451	13.994	1.00	38.35	C
ATOM	2429	C	GLU	A	448	82.967	43.667	14.076	1.00	36.95	C
ATOM	2430	O	GLU	A	448	83.655	43.864	15.075	1.00	35.90	O
ATOM	2431	CB	GLU	A	448	82.656	41.392	13.062	1.00	40.48	C
ATOM	2432	CG	GLU	A	448	83.949	40.772	13.586	1.00	45.60	C
ATOM	2433	CD	GLU	A	448	84.553	39.739	12.634	1.00	50.26	C
ATOM	2434	OE1	GLU	A	448	85.094	40.133	11.573	1.00	51.53	O
ATOM	2435	OE2	GLU	A	448	84.482	38.529	12.950	1.00	52.94	O
ATOM	2436	N	ALA	A	449	82.960	44.485	13.028	1.00	34.49	N

ATOM	2437	CA	ALA	A	449	83.793	45.683	12.982	1.00	34.45	C
ATOM	2438	C	ALA	A	449	83.417	46.670	14.089	1.00	33.89	C
ATOM	2439	O	ALA	A	449	84.282	47.195	14.790	1.00	33.96	O
ATOM	2440	CB	ALA	A	449	83.665	46.361	11.616	1.00	34.26	C
ATOM	2441	N	SER	A	450	82.123	46.924	14.233	1.00	31.81	N
ATOM	2442	CA	SER	A	450	81.638	47.841	15.252	1.00	32.08	C
ATOM	2443	C	SER	A	450	82.023	47.380	16.657	1.00	31.86	C
ATOM	2444	O	SER	A	450	82.531	48.166	17.463	1.00	29.55	O
ATOM	2445	CB	SER	A	450	80.112	47.969	15.167	1.00	30.70	C
ATOM	2446	OG	SER	A	450	79.724	48.753	14.056	1.00	31.66	O
ATOM	2447	N	LEU	A	451	81.784	46.103	16.941	1.00	31.11	N
ATOM	2448	CA	LEU	A	451	82.077	45.556	18.259	1.00	32.52	C
ATOM	2449	C	LEU	A	451	83.565	45.413	18.559	1.00	33.63	C
ATOM	2450	O	LEU	A	451	83.959	45.383	19.723	1.00	33.14	O
ATOM	2451	CB	LEU	A	451	81.347	44.227	18.449	1.00	30.21	C
ATOM	2452	CG	LEU	A	451	79.824	44.407	18.426	1.00	30.73	C
ATOM	2453	CD1	LEU	A	451	79.143	43.096	18.766	1.00	27.89	C
ATOM	2454	CD2	LEU	A	451	79.411	45.501	19.416	1.00	28.68	C
ATOM	2455	N	ASN	A	452	84.392	45.331	17.521	1.00	35.18	N
ATOM	2456	CA	ASN	A	452	85.831	45.251	17.732	1.00	35.86	C
ATOM	2457	C	ASN	A	452	86.294	46.601	18.274	1.00	35.32	C
ATOM	2458	O	ASN	A	452	87.176	46.665	19.134	1.00	34.79	O
ATOM	2459	CB	ASN	A	452	86.581	44.941	16.429	1.00	37.41	C
ATOM	2460	CG	ASN	A	452	86.632	43.459	16.125	1.00	41.69	C
ATOM	2461	OD1	ASN	A	452	86.668	42.626	17.037	1.00	45.32	O
ATOM	2462	ND2	ASN	A	452	86.656	43.117	14.841	1.00	44.05	N
ATOM	2463	N	LYS	A	453	85.695	47.680	17.774	1.00	34.56	N
ATOM	2464	CA	LYS	A	453	86.069	49.012	18.235	1.00	35.20	C
ATOM	2465	C	LYS	A	453	85.568	49.255	19.651	1.00	32.43	C
ATOM	2466	O	LYS	A	453	86.237	49.915	20.442	1.00	31.92	O
ATOM	2467	CB	LYS	A	453	85.533	50.098	17.292	1.00	36.51	C
ATOM	2468	CG	LYS	A	453	86.090	49.988	15.877	1.00	42.24	C
ATOM	2469	CD	LYS	A	453	86.165	51.338	15.160	1.00	43.06	C
ATOM	2470	CE	LYS	A	453	84.835	52.050	15.172	1.00	45.98	C
ATOM	2471	NZ	LYS	A	453	84.889	53.331	14.419	1.00	46.25	N
ATOM	2472	N	VAL	A	454	84.391	48.724	19.968	1.00	30.18	N
ATOM	2473	CA	VAL	A	454	83.836	48.878	21.303	1.00	28.56	C
ATOM	2474	C	VAL	A	454	84.741	48.143	22.295	1.00	29.40	C
ATOM	2475	O	VAL	A	454	85.100	48.690	23.338	1.00	26.82	O
ATOM	2476	CB	VAL	A	454	82.401	48.306	21.390	1.00	29.78	C
ATOM	2477	CG1	VAL	A	454	81.943	48.247	22.855	1.00	26.04	C
ATOM	2478	CG2	VAL	A	454	81.444	49.181	20.572	1.00	29.03	C
ATOM	2479	N	LYS	A	455	85.111	46.910	21.953	1.00	28.71	N
ATOM	2480	CA	LYS	A	455	85.984	46.095	22.799	1.00	30.25	C
ATOM	2481	C	LYS	A	455	87.330	46.774	23.020	1.00	30.25	C
ATOM	2482	O	LYS	A	455	87.864	46.779	24.125	1.00	29.71	O
ATOM	2483	CB	LYS	A	455	86.225	44.725	22.159	1.00	29.78	C
ATOM	2484	CG	LYS	A	455	85.048	43.776	22.199	1.00	31.31	C
ATOM	2485	CD	LYS	A	455	85.354	42.555	21.340	1.00	34.36	C
ATOM	2486	CE	LYS	A	455	84.234	41.536	21.385	1.00	38.66	C
ATOM	2487	NZ	LYS	A	455	84.480	40.397	20.448	1.00	40.02	N
ATOM	2488	N	SER	A	456	87.876	47.338	21.950	1.00	31.20	N
ATOM	2489	CA	SER	A	456	89.159	48.020	22.012	1.00	32.66	C
ATOM	2490	C	SER	A	456	89.063	49.232	22.939	1.00	32.37	C
ATOM	2491	O	SER	A	456	89.938	49.461	23.786	1.00	32.02	O
ATOM	2492	CB	SER	A	456	89.583	48.453	20.601	1.00	33.72	C
ATOM	2493	OG	SER	A	456	90.866	49.044	20.615	1.00	36.70	O

ATOM	2494	N	THR	A	457	87.994	50.009	22.776	1.00	29.64	N
ATOM	2495	CA	THR	A	457	87.787	51.178	23.614	1.00	29.25	C
ATOM	2496	C	THR	A	457	87.595	50.733	25.060	1.00	28.90	C
ATOM	2497	O	THR	A	457	88.086	51.380	25.981	1.00	28.75	O
ATOM	2498	CB	THR	A	457	86.561	51.982	23.158	1.00	29.05	C
ATOM	2499	OG1	THR	A	457	86.757	52.393	21.805	1.00	32.49	O
ATOM	2500	CG2	THR	A	457	86.369	53.216	24.022	1.00	26.06	C
ATOM	2501	N	MET	A	458	86.884	49.625	25.259	1.00	28.56	N
ATOM	2502	CA	MET	A	458	86.663	49.111	26.603	1.00	27.60	C
ATOM	2503	C	MET	A	458	87.993	48.832	27.288	1.00	28.20	C
ATOM	2504	O	MET	A	458	88.167	49.155	28.459	1.00	28.30	O
ATOM	2505	CB	MET	A	458	85.792	47.853	26.560	1.00	27.08	C
ATOM	2506	CG	MET	A	458	84.306	48.170	26.380	1.00	26.92	C
ATOM	2507	SD	MET	A	458	83.227	46.746	26.210	1.00	28.93	S
ATOM	2508	CE	MET	A	458	83.415	45.945	27.805	1.00	27.06	C
ATOM	2509	N	CYS	A	459	88.944	48.252	26.561	1.00	29.24	N
ATOM	2510	CA	CYS	A	459	90.254	47.982	27.141	1.00	30.30	C
ATOM	2511	C	CYS	A	459	91.009	49.273	27.466	1.00	30.36	C
ATOM	2512	O	CYS	A	459	91.818	49.303	28.397	1.00	28.82	O
ATOM	2513	CB	CYS	A	459	91.092	47.100	26.212	1.00	32.96	C
ATOM	2514	SG	CYS	A	459	90.670	45.337	26.352	1.00	36.19	S
ATOM	2515	N	ASN	A	460	90.757	50.335	26.702	1.00	28.82	N
ATOM	2516	CA	ASN	A	460	91.411	51.609	26.986	1.00	29.47	C
ATOM	2517	C	ASN	A	460	90.884	52.087	28.334	1.00	28.59	C
ATOM	2518	O	ASN	A	460	91.586	52.756	29.079	1.00	29.35	O
ATOM	2519	CB	ASN	A	460	91.078	52.677	25.937	1.00	29.43	C
ATOM	2520	CG	ASN	A	460	91.756	52.434	24.610	1.00	32.45	C
ATOM	2521	OD1	ASN	A	460	91.097	52.161	23.612	1.00	33.79	O
ATOM	2522	ND2	ASN	A	460	93.080	52.536	24.589	1.00	31.89	N
ATOM	2523	N	CYS	A	461	89.636	51.735	28.633	1.00	28.48	N
ATOM	2524	CA	CYS	A	461	88.993	52.143	29.878	1.00	27.53	C
ATOM	2525	C	CYS	A	461	89.204	51.138	31.010	1.00	27.92	C
ATOM	2526	O	CYS	A	461	88.633	51.289	32.086	1.00	27.95	O
ATOM	2527	CB	CYS	A	461	87.486	52.355	29.646	1.00	29.51	C
ATOM	2528	SG	CYS	A	461	87.070	53.620	28.389	1.00	32.81	S
ATOM	2529	N	GLY	A	462	90.021	50.119	30.762	1.00	27.78	N
ATOM	2530	CA	GLY	A	462	90.293	49.106	31.767	1.00	27.70	C
ATOM	2531	C	GLY	A	462	89.133	48.163	32.052	1.00	28.72	C
ATOM	2532	O	GLY	A	462	88.987	47.674	33.176	1.00	29.35	O
ATOM	2533	N	ALA	A	463	88.315	47.881	31.043	1.00	27.30	N
ATOM	2534	CA	ALA	A	463	87.163	47.012	31.248	1.00	27.53	C
ATOM	2535	C	ALA	A	463	87.121	45.785	30.352	1.00	27.82	C
ATOM	2536	O	ALA	A	463	87.288	45.886	29.139	1.00	27.55	O
ATOM	2537	CB	ALA	A	463	85.879	47.820	31.069	1.00	26.38	C
ATOM	2538	N	LEU	A	464	86.884	44.628	30.961	1.00	28.56	N
ATOM	2539	CA	LEU	A	464	86.785	43.369	30.223	1.00	30.06	C
ATOM	2540	C	LEU	A	464	85.330	42.963	30.014	1.00	29.07	C
ATOM	2541	O	LEU	A	464	85.043	42.046	29.246	1.00	31.05	O
ATOM	2542	CB	LEU	A	464	87.512	42.237	30.961	1.00	31.49	C
ATOM	2543	CG	LEU	A	464	88.993	42.025	30.640	1.00	33.97	C
ATOM	2544	CD1	LEU	A	464	89.150	41.723	29.158	1.00	36.04	C
ATOM	2545	CD2	LEU	A	464	89.788	43.265	31.004	1.00	38.27	C
ATOM	2546	N	THR	A	465	84.419	43.633	30.712	1.00	27.77	N
ATOM	2547	CA	THR	A	465	82.996	43.338	30.595	1.00	27.41	C
ATOM	2548	C	THR	A	465	82.197	44.630	30.674	1.00	27.20	C
ATOM	2549	O	THR	A	465	82.709	45.664	31.107	1.00	26.83	O
ATOM	2550	CB	THR	A	465	82.494	42.417	31.736	1.00	27.84	C

TABLE 2

ATOM	2551	OG1	THR	A	465	82.536	43.133	32.975	1.00	28.30	O
ATOM	2552	CG2	THR	A	465	83.355	41.159	31.838	1.00	28.72	C
ATOM	2553	N	ILE	A	466	80.936	44.567	30.260	1.00	25.31	N
ATOM	2554	CA	ILE	A	466	80.085	45.743	30.298	1.00	25.03	C
ATOM	2555	C	ILE	A	466	79.898	46.236	31.732	1.00	24.87	C
ATOM	2556	O	ILE	A	466	79.985	47.430	31.993	1.00	27.04	O
ATOM	2557	CB	ILE	A	466	78.724	45.456	29.629	1.00	25.22	C
ATOM	2558	CG1	ILE	A	466	78.939	45.313	28.114	1.00	24.45	C
ATOM	2559	CG2	ILE	A	466	77.726	46.565	29.944	1.00	22.53	C
ATOM	2560	CD1	ILE	A	466	77.699	44.908	27.350	1.00	25.70	C
ATOM	2561	N	PRO	A	467	79.638	45.327	32.684	1.00	25.57	N
ATOM	2562	CA	PRO	A	467	79.468	45.805	34.058	1.00	25.31	C
ATOM	2563	C	PRO	A	467	80.730	46.506	34.570	1.00	26.95	C
ATOM	2564	O	PRO	A	467	80.649	47.499	35.292	1.00	27.35	O
ATOM	2565	CB	PRO	A	467	79.149	44.525	34.828	1.00	25.79	C
ATOM	2566	CG	PRO	A	467	78.393	43.723	33.811	1.00	24.45	C
ATOM	2567	CD	PRO	A	467	79.258	43.909	32.577	1.00	23.17	C
ATOM	2568	N	GLN	A	468	81.897	46.003	34.186	1.00	27.99	N
ATOM	2569	CA	GLN	A	468	83.137	46.623	34.630	1.00	28.59	C
ATOM	2570	C	GLN	A	468	83.320	47.995	33.976	1.00	29.85	C
ATOM	2571	O	GLN	A	468	83.844	48.926	34.594	1.00	29.02	O
ATOM	2572	CB	GLN	A	468	84.320	45.710	34.323	1.00	29.66	C
ATOM	2573	CG	GLN	A	468	85.623	46.216	34.879	1.00	30.83	C
ATOM	2574	CD	GLN	A	468	86.722	45.175	34.834	1.00	29.49	C
ATOM	2575	OE1	GLN	A	468	86.806	44.380	33.900	1.00	27.39	O
ATOM	2576	NE2	GLN	A	468	87.589	45.194	35.839	1.00	32.22	N
ATOM	2577	N	LEU	A	469	82.872	48.124	32.729	1.00	28.18	N
ATOM	2578	CA	LEU	A	469	82.961	49.395	32.025	1.00	26.94	C
ATOM	2579	C	LEU	A	469	82.029	50.413	32.676	1.00	27.29	C
ATOM	2580	O	LEU	A	469	82.379	51.587	32.815	1.00	26.46	O
ATOM	2581	CB	LEU	A	469	82.566	49.232	30.554	1.00	27.22	C
ATOM	2582	CG	LEU	A	469	82.343	50.536	29.777	1.00	28.28	C
ATOM	2583	CD1	LEU	A	469	83.683	51.232	29.552	1.00	25.24	C
ATOM	2584	CD2	LEU	A	469	81.657	50.238	28.438	1.00	27.64	C
ATOM	2585	N	GLN	A	470	80.845	49.959	33.076	1.00	26.40	N
ATOM	2586	CA	GLN	A	470	79.864	50.851	33.685	1.00	28.89	C
ATOM	2587	C	GLN	A	470	80.344	51.351	35.038	1.00	29.84	C
ATOM	2588	O	GLN	A	470	80.001	52.444	35.480	1.00	28.12	O
ATOM	2589	CB	GLN	A	470	78.513	50.132	33.807	1.00	27.17	C
ATOM	2590	CG	GLN	A	470	77.962	49.716	32.434	1.00	27.68	C
ATOM	2591	CD	GLN	A	470	76.666	48.938	32.506	1.00	28.13	C
ATOM	2592	OE1	GLN	A	470	76.449	48.166	33.432	1.00	28.58	O
ATOM	2593	NE2	GLN	A	470	75.803	49.122	31.508	1.00	26.29	N
ATOM	2594	N	SER	A	471	81.173	50.543	35.676	1.00	31.64	N
ATOM	2595	CA	SER	A	471	81.712	50.880	36.976	1.00	31.86	C
ATOM	2596	C	SER	A	471	82.949	51.783	36.887	1.00	32.13	C
ATOM	2597	O	SER	A	471	83.081	52.742	37.646	1.00	32.18	O
ATOM	2598	CB	SER	A	471	82.050	49.585	37.722	1.00	30.51	C
ATOM	2599	OG	SER	A	471	82.831	49.842	38.870	1.00	33.39	O
ATOM	2600	N	LYS	A	472	83.830	51.493	35.936	1.00	32.80	N
ATOM	2601	CA	LYS	A	472	85.081	52.234	35.783	1.00	33.19	C
ATOM	2602	C	LYS	A	472	85.148	53.388	34.781	1.00	32.28	C
ATOM	2603	O	LYS	A	472	86.097	54.163	34.813	1.00	32.33	O
ATOM	2604	CB	LYS	A	472	86.201	51.245	35.452	1.00	34.04	C
ATOM	2605	CG	LYS	A	472	86.335	50.127	36.466	1.00	36.23	C
ATOM	2606	CD	LYS	A	472	87.335	49.075	36.019	1.00	38.07	C
ATOM	2607	CE	LYS	A	472	88.755	49.592	36.059	1.00	39.38	C

ATOM	2608	NZ	LYS	A	472	89.723	48.517	35.698	1.00	41.01	N
ATOM	2609	N	ALA	A	473	84.170	53.506	33.889	1.00	31.34	N
ATOM	2610	CA	ALA	A	473	84.201	54.572	32.892	1.00	30.17	C
ATOM	2611	C	ALA	A	473	84.324	55.987	33.461	1.00	30.11	C
ATOM	2612	O	ALA	A	473	83.718	56.334	34.480	1.00	30.70	O
ATOM	2613	CB	ALA	A	473	82.971	54.489	31.986	1.00	29.13	C
ATOM	2614	N	LYS	A	474	85.136	56.788	32.781	1.00	30.05	N
ATOM	2615	CA	LYS	A	474	85.362	58.184	33.129	1.00	29.85	C
ATOM	2616	C	LYS	A	474	84.772	58.909	31.928	1.00	29.93	C
ATOM	2617	O	LYS	A	474	85.302	58.833	30.816	1.00	29.14	O
ATOM	2618	CB	LYS	A	474	86.862	58.441	33.277	1.00	28.50	C
ATOM	2619	CG	LYS	A	474	87.460	57.684	34.471	1.00	28.70	C
ATOM	2620	CD	LYS	A	474	88.943	57.375	34.279	1.00	27.54	C
ATOM	2621	CE	LYS	A	474	89.803	58.620	34.334	1.00	29.17	C
ATOM	2622	NZ	LYS	A	474	91.222	58.265	34.018	1.00	28.64	N
ATOM	2623	N	ILE	A	475	83.660	59.597	32.150	1.00	29.12	N
ATOM	2624	CA	ILE	A	475	82.968	60.254	31.056	1.00	29.85	C
ATOM	2625	C	ILE	A	475	82.935	61.764	31.176	1.00	29.94	C
ATOM	2626	O	ILE	A	475	82.444	62.314	32.166	1.00	30.35	O
ATOM	2627	CB	ILE	A	475	81.524	59.703	30.943	1.00	29.86	C
ATOM	2628	CG1	ILE	A	475	81.564	58.164	30.940	1.00	29.42	C
ATOM	2629	CG2	ILE	A	475	80.867	60.213	29.666	1.00	29.91	C
ATOM	2630	CD1	ILE	A	475	80.205	57.470	30.951	1.00	23.94	C
ATOM	2631	N	THR	A	476	83.459	62.429	30.153	1.00	29.56	N
ATOM	2632	CA	THR	A	476	83.511	63.881	30.141	1.00	29.14	C
ATOM	2633	C	THR	A	476	82.686	64.506	29.042	1.00	28.15	C
ATOM	2634	O	THR	A	476	82.582	63.986	27.932	1.00	26.60	O
ATOM	2635	CB	THR	A	476	84.962	64.414	29.981	1.00	28.25	C
ATOM	2636	OG1	THR	A	476	84.953	65.844	30.066	1.00	32.24	O
ATOM	2637	CG2	THR	A	476	85.535	64.022	28.629	1.00	26.65	C
ATOM	2638	N	LEU	A	477	82.105	65.644	29.381	1.00	29.09	N
ATOM	2639	CA	LEU	A	477	81.312	66.424	28.456	1.00	32.22	C
ATOM	2640	C	LEU	A	477	82.352	67.281	27.731	1.00	32.43	C
ATOM	2641	O	LEU	A	477	83.395	67.592	28.304	1.00	32.10	O
ATOM	2642	CB	LEU	A	477	80.352	67.312	29.256	1.00	33.05	C
ATOM	2643	CG	LEU	A	477	79.239	68.097	28.566	1.00	35.08	C
ATOM	2644	CD1	LEU	A	477	78.264	67.138	27.910	1.00	32.98	C
ATOM	2645	CD2	LEU	A	477	78.526	68.966	29.604	1.00	35.36	C
ATOM	2646	N	VAL	A	478	82.093	67.635	26.477	1.00	33.80	N
ATOM	2647	CA	VAL	A	478	83.018	68.480	25.726	1.00	35.55	C
ATOM	2648	C	VAL	A	478	82.280	69.767	25.365	1.00	35.88	C
ATOM	2649	O	VAL	A	478	81.052	69.787	25.304	1.00	35.41	O
ATOM	2650	CB	VAL	A	478	83.516	67.796	24.422	1.00	36.48	C
ATOM	2651	CG1	VAL	A	478	83.960	66.370	24.718	1.00	37.57	C
ATOM	2652	CG2	VAL	A	478	82.428	67.822	23.363	1.00	38.80	C
ATOM	2653	N	SER	A	479	83.028	70.839	25.132	1.00	37.26	N
ATOM	2654	CA	SER	A	479	82.432	72.127	24.794	1.00	39.38	C
ATOM	2655	C	SER	A	479	81.806	72.119	23.406	1.00	40.82	C
ATOM	2656	O	SER	A	479	82.200	71.341	22.537	1.00	41.28	O
ATOM	2657	CB	SER	A	479	83.488	73.230	24.869	1.00	38.01	C
ATOM	2658	OG	SER	A	479	84.515	72.999	23.924	1.00	38.36	O
ATOM	2659	N	SER	A	480	80.825	72.990	23.203	1.00	44.34	N
ATOM	2660	CA	SER	A	480	80.152	73.083	21.912	1.00	48.75	C
ATOM	2661	C	SER	A	480	81.149	73.491	20.828	1.00	50.10	C
ATOM	2662	O	SER	A	480	81.088	73.005	19.698	1.00	50.70	O
ATOM	2663	CB	SER	A	480	79.017	74.104	21.986	1.00	49.74	C
ATOM	2664	OG	SER	A	480	79.516	75.382	22.326	1.00	52.76	O

ATOM	2665	N	VAL	A	481	82.074	74.377	21.187	1.00	52.36	N
ATOM	2666	CA	VAL	A	481	83.096	74.856	20.262	1.00	54.26	C
ATOM	2667	C	VAL	A	481	83.975	73.729	19.720	1.00	55.31	C
ATOM	2668	O	VAL	A	481	84.319	73.721	18.537	1.00	55.24	O
ATOM	2669	CB	VAL	A	481	84.017	75.901	20.937	1.00	54.94	C
ATOM	2670	CG1	VAL	A	481	85.189	76.234	20.021	1.00	55.96	C
ATOM	2671	CG2	VAL	A	481	83.229	77.162	21.256	1.00	55.59	C
ATOM	2672	N	SER	A	482	84.343	72.788	20.586	1.00	56.16	N
ATOM	2673	CA	SER	A	482	85.190	71.670	20.183	1.00	58.27	C
ATOM	2674	C	SER	A	482	84.491	70.750	19.184	1.00	60.34	C
ATOM	2675	O	SER	A	482	85.144	69.962	18.493	1.00	60.26	O
ATOM	2676	CB	SER	A	482	85.620	70.855	21.408	1.00	57.59	C
ATOM	2677	OG	SER	A	482	84.518	70.189	21.998	1.00	57.44	O
ATOM	2678	N	ILE	A	483	83.166	70.851	19.107	1.00	61.66	N
ATOM	2679	CA	ILE	A	483	82.395	70.016	18.192	1.00	64.37	C
ATOM	2680	C	ILE	A	483	82.307	70.637	16.795	1.00	65.60	C
ATOM	2681	O	ILE	A	483	82.290	71.886	16.692	1.00	65.96	O
ATOM	2682	CB	ILE	A	483	80.959	69.786	18.728	1.00	64.32	C
ATOM	2683	CG1	ILE	A	483	81.023	69.252	20.161	1.00	64.61	C
ATOM	2684	CG2	ILE	A	483	80.215	68.796	17.835	1.00	64.26	C
ATOM	2685	CD1	ILE	A	483	79.670	68.993	20.789	1.00	64.99	C
TER	2686		ILE	A	483						
HETATM	2687	K	K	A	900	52.942	60.264	29.342	0.75	35.52	K
HETATM	2688	P	IMP		602	67.729	55.171	15.018	1.00	32.01	P
HETATM	2689	O1P	IMP		602	67.318	55.116	13.589	1.00	35.06	O
HETATM	2690	O2P	IMP		602	68.541	53.958	15.324	1.00	37.34	O
HETATM	2691	O3P	IMP		602	68.509	56.460	15.351	1.00	34.23	O
HETATM	2692	O5*	IMP		602	66.513	55.208	16.042	1.00	32.49	O
HETATM	2693	C5*	IMP		602	65.484	54.230	15.900	1.00	28.06	C
HETATM	2694	C4*	IMP		602	64.416	54.369	16.948	1.00	29.30	C
HETATM	2695	O4*	IMP		602	63.654	55.545	16.512	1.00	28.92	O
HETATM	2696	C3*	IMP		602	63.350	53.301	17.112	1.00	27.97	C
HETATM	2697	O3*	IMP		602	63.765	52.190	17.882	1.00	29.87	O
HETATM	2698	C2*	IMP		602	62.219	54.048	17.747	1.00	28.37	C
HETATM	2699	O2*	IMP		602	62.308	54.094	19.151	1.00	28.77	O
HETATM	2700	C1*	IMP		602	62.341	55.422	17.066	1.00	29.44	C
HETATM	2701	N9	IMP		602	61.392	55.563	15.918	1.00	31.97	N
HETATM	2702	C8	IMP		602	60.890	54.644	15.016	1.00	32.78	C
HETATM	2703	N7	IMP		602	60.086	55.173	14.154	1.00	32.55	N
HETATM	2704	C5	IMP		602	60.027	56.497	14.463	1.00	34.42	C
HETATM	2705	C6	IMP		602	59.302	57.582	13.855	1.00	35.14	C
HETATM	2706	O6	IMP		602	58.555	57.521	12.883	1.00	36.42	O
HETATM	2707	N1	IMP		602	59.516	58.848	14.495	1.00	36.83	N
HETATM	2708	C2	IMP		602	60.355	59.011	15.609	1.00	38.21	C
HETATM	2709	N3	IMP		602	61.034	57.973	16.170	1.00	35.63	N
HETATM	2710	C4	IMP		602	60.832	56.774	15.563	1.00	34.37	C
HETATM	2711	O	HOH		1	63.019	58.881	18.340	1.00	44.26	O
HETATM	2712	O	HOH		2	52.277	57.766	28.053	1.00	120.54	O
HETATM	2713	O	HOH		3	66.605	47.974	38.976	1.00	25.54	O
HETATM	2714	O	HOH		4	59.386	45.205	36.943	1.00	29.43	O
HETATM	2715	O	HOH		5	79.662	41.845	29.507	1.00	22.13	O
HETATM	2716	O	HOH		6	65.938	60.529	24.679	1.00	31.17	O
HETATM	2717	O	HOH		7	74.980	45.671	32.871	1.00	30.42	O
HETATM	2718	O	HOH		8	57.548	58.753	28.347	1.00	28.92	O
HETATM	2719	O	HOH		9	70.703	54.421	21.919	1.00	26.74	O
HETATM	2720	O	HOH		10	70.985	53.252	14.290	1.00	27.12	O
HETATM	2721	O	HOH		11	45.680	44.301	11.265	1.00	103.96	O

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HETATM	2722	O	HOH	12	77.744	53.946	34.272	1.00	32.08	O
HETATM	2723	O	HOH	13	58.727	51.272	23.006	1.00	27.53	O
HETATM	2724	O	HOH	14	62.326	38.666	34.100	1.00	27.41	O
HETATM	2725	O	HOH	15	56.691	78.735	34.475	1.00	29.79	O
HETATM	2726	O	HOH	16	88.368	53.773	33.242	1.00	29.09	O
HETATM	2727	O	HOH	17	72.567	38.252	33.805	1.00	32.29	O
HETATM	2728	O	HOH	18	87.198	55.495	31.179	1.00	28.25	O
HETATM	2729	O	HOH	19	49.308	44.270	21.126	1.00	33.03	O
HETATM	2730	O	HOH	20	78.730	48.078	37.343	1.00	33.84	O
HETATM	2731	O	HOH	21	73.616	57.426	36.203	1.00	27.28	O
HETATM	2732	O	HOH	22	56.311	77.113	37.092	1.00	34.13	O
HETATM	2733	O	HOH	23	74.197	59.875	37.788	1.00	40.63	O
HETATM	2734	O	HOH	24	64.449	41.371	7.872	1.00	35.33	O
HETATM	2735	O	HOH	25	76.108	43.846	30.984	1.00	26.68	O
HETATM	2736	O	HOH	26	70.175	33.467	27.535	1.00	36.79	O
HETATM	2737	O	HOH	27	84.289	53.139	21.052	1.00	32.01	O
HETATM	2738	O	HOH	28	56.502	57.506	38.867	1.00	42.20	O
HETATM	2739	O	HOH	29	48.256	54.233	36.924	1.00	41.83	O
HETATM	2740	O	HOH	30	75.042	38.867	31.153	1.00	33.27	O
HETATM	2741	O	HOH	31	69.348	62.804	21.515	1.00	38.19	O
HETATM	2742	O	HOH	32	92.355	40.593	20.080	1.00	59.23	O
HETATM	2743	O	HOH	33	59.908	50.926	20.187	1.00	37.89	O
HETATM	2744	O	HOH	34	53.040	51.707	38.077	1.00	33.13	O
HETATM	2745	O	HOH	35	58.612	45.227	6.010	1.00	41.56	O
HETATM	2746	O	HOH	36	69.127	67.876	32.847	1.00	41.45	O
HETATM	2747	O	HOH	37	63.999	56.486	20.273	1.00	37.87	O
HETATM	2748	O	HOH	38	52.165	53.830	25.868	1.00	36.90	O
HETATM	2749	O	HOH	39	65.226	36.648	34.797	1.00	33.52	O
HETATM	2750	O	HOH	40	67.969	38.369	46.331	1.00	38.33	O
HETATM	2751	O	HOH	41	76.432	41.259	32.168	1.00	31.45	O
HETATM	2752	O	HOH	42	58.931	42.035	5.988	1.00	51.68	O
HETATM	2753	O	HOH	43	58.873	38.279	34.683	1.00	31.39	O
HETATM	2754	O	HOH	44	91.268	41.892	34.973	1.00	45.58	O
HETATM	2755	O	HOH	45	87.214	67.124	30.708	1.00	29.61	O
HETATM	2756	O	HOH	46	61.767	50.507	18.007	1.00	29.58	O
HETATM	2757	O	HOH	47	53.679	55.874	20.408	1.00	48.69	O
HETATM	2758	O	HOH	48	56.278	41.477	37.489	1.00	44.57	O
HETATM	2759	O	HOH	49	59.791	59.574	31.027	1.00	52.11	O
HETATM	2760	O	HOH	50	62.820	39.505	6.099	1.00	44.52	O
HETATM	2761	O	HOH	51	49.843	43.256	7.770	1.00	52.85	O
HETATM	2762	O	HOH	52	58.407	35.678	26.960	1.00	39.42	O
HETATM	2763	O	HOH	53	59.608	51.214	9.860	1.00	33.11	O
HETATM	2764	O	HOH	54	59.577	51.575	16.371	1.00	31.46	O
HETATM	2765	O	HOH	55	74.077	50.717	36.341	1.00	43.49	O
HETATM	2766	O	HOH	56	79.182	38.296	17.383	1.00	40.40	O
HETATM	2767	O	HOH	57	75.288	70.156	31.710	1.00	40.54	O
HETATM	2768	O	HOH	58	64.697	73.440	32.795	1.00	34.94	O
HETATM	2769	O	HOH	59	66.251	37.651	16.856	1.00	33.53	O
HETATM	2770	O	HOH	60	63.282	31.611	25.681	1.00	44.64	O
HETATM	2771	O	HOH	61	71.430	55.918	41.920	1.00	36.49	O
HETATM	2772	O	HOH	62	65.638	58.677	21.385	1.00	35.26	O
HETATM	2773	O	HOH	63	55.080	46.995	17.425	1.00	53.19	O
HETATM	2774	O	HOH	64	50.562	31.766	16.460	1.00	43.10	O
HETATM	2775	O	HOH	65	74.644	37.157	10.791	1.00	39.58	O
HETATM	2776	O	HOH	66	62.315	61.756	37.610	1.00	36.98	O
HETATM	2777	O	HOH	67	73.617	64.778	30.740	1.00	42.65	O
HETATM	2778	O	HOH	68	55.753	71.270	16.210	1.00	37.70	O

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HETATM	2779	O	HOH	69	60.894	73.990	38.995	1.00	52.68	O
HETATM	2780	O	HOH	70	54.230	73.527	38.967	1.00	53.01	O
HETATM	2781	O	HOH	71	85.347	49.247	39.609	1.00	46.03	O
HETATM	2782	O	HOH	72	90.366	44.868	34.983	1.00	60.08	O
HETATM	2783	O	HOH	73	74.553	34.802	40.308	1.00	42.36	O
HETATM	2784	O	HOH	74	92.253	47.877	34.577	1.00	48.24	O
HETATM	2785	O	HOH	75	62.333	64.301	35.516	1.00	42.55	O
HETATM	2786	O	HOH	76	75.293	38.619	8.177	1.00	42.95	O
HETATM	2787	O	HOH	77	74.834	47.737	35.645	1.00	45.47	O
HETATM	2788	O	HOH	78	43.248	43.725	23.511	1.00	41.40	O
HETATM	2789	O	HOH	79	92.749	48.847	23.299	1.00	48.74	O
HETATM	2790	O	HOH	80	81.622	38.388	24.165	1.00	48.40	O
HETATM	2791	O	HOH	81	69.535	35.845	7.684	1.00	44.93	O
HETATM	2792	O	HOH	82	66.021	28.568	15.079	1.00	43.38	O
HETATM	2793	O	HOH	83	63.363	58.444	43.595	1.00	60.19	O
HETATM	2794	O	HOH	84	50.760	46.222	35.814	1.00	40.54	O
HETATM	2795	O	HOH	85	73.050	33.188	26.343	1.00	59.24	O
HETATM	2796	O	HOH	86	60.595	29.978	22.680	1.00	52.27	O
HETATM	2797	O	HOH	87	69.555	45.175	46.108	1.00	47.35	O
HETATM	2798	O	HOH	88	91.680	50.881	35.482	1.00	58.01	O
HETATM	2799	O	HOH	89	54.754	33.372	37.626	1.00	47.38	O
HETATM	2800	O	HOH	90	70.270	53.925	17.757	1.00	43.71	O
HETATM	2801	O	HOH	91	86.174	38.632	29.884	1.00	51.68	O
HETATM	2802	O	HOH	92	50.223	32.982	11.986	1.00	53.26	O
HETATM	2803	O	HOH	93	69.797	32.727	38.335	1.00	48.52	O
HETATM	2804	O	HOH	94	45.294	44.791	32.974	1.00	45.93	O
HETATM	2805	O	HOH	95	50.957	50.719	21.814	1.00	47.04	O
HETATM	2806	O	HOH	96	67.427	59.503	38.921	1.00	51.20	O
HETATM	2807	O	HOH	97	45.814	48.859	27.359	1.00	52.57	O
HETATM	2808	O	HOH	98	67.272	72.374	31.829	1.00	43.34	O
HETATM	2809	O	HOH	99	81.547	54.867	13.482	1.00	56.22	O
HETATM	2810	O	HOH	100	73.436	41.135	42.320	1.00	51.99	O
HETATM	2811	O	HOH	101	45.438	41.435	12.889	1.00	51.81	O
HETATM	2812	O	HOH	102	72.135	31.364	23.780	1.00	49.13	O
HETATM	2813	O	HOH	103	64.895	66.481	39.105	1.00	64.76	O
HETATM	2814	O	HOH	104	67.577	69.286	38.086	1.00	45.89	O
HETATM	2815	O	HOH	105	69.612	68.635	35.879	1.00	63.93	O
HETATM	2816	O	HOH	106	72.031	67.254	32.046	1.00	48.47	O
HETATM	2817	O	HOH	107	72.305	61.345	21.016	1.00	44.10	O
HETATM	2818	O	HOH	108	74.756	62.694	19.263	1.00	48.65	O
HETATM	2819	O	HOH	109	95.910	46.347	27.675	1.00	53.29	O
HETATM	2820	O	HOH	110	94.046	48.897	25.977	1.00	51.23	O
HETATM	2821	O	HOH	111	97.282	43.405	26.308	1.00	55.88	O
HETATM	2822	O	HOH	112	96.131	51.037	25.453	1.00	43.15	O
HETATM	2823	O	HOH	113	79.236	36.729	24.882	1.00	50.87	O
HETATM	2824	O	HOH	114	79.234	40.387	31.965	1.00	38.53	O
HETATM	2825	O	HOH	115	81.670	39.064	21.018	1.00	60.16	O
HETATM	2826	O	HOH	116	60.063	41.314	40.014	1.00	53.39	O
HETATM	2827	O	HOH	117	68.407	44.274	48.786	1.00	58.93	O
HETATM	2828	O	HOH	118	73.852	38.881	40.464	1.00	54.08	O
HETATM	2829	O	HOH	119	66.435	34.694	36.949	1.00	50.41	O
HETATM	2830	O	HOH	120	68.667	31.549	25.842	1.00	64.44	O
HETATM	2831	O	HOH	121	65.857	31.082	26.881	1.00	40.73	O
HETATM	2832	O	HOH	122	62.672	33.363	29.890	1.00	48.58	O
HETATM	2833	O	HOH	123	61.493	33.436	27.087	1.00	48.36	O
HETATM	2834	O	HOH	124	69.854	28.735	27.500	1.00	61.68	O
HETATM	2835	O	HOH	125	64.874	31.147	29.825	1.00	60.07	O



HETATM	2836	O	HOH	126	71.711	32.640	30.005	1.00	47.37	O
HETATM	2837	O	HOH	127	52.466	50.282	19.032	1.00	52.65	O
HETATM	2838	O	HOH	128	49.739	53.604	24.073	1.00	61.02	O
HETATM	2839	O	HOH	129	48.481	31.684	25.480	1.00	54.44	O
HETATM	2840	O	HOH	130	65.224	61.485	37.955	1.00	47.75	O
HETATM	2841	O	HOH	131	72.681	36.196	7.328	1.00	60.10	O
HETATM	2842	O	HOH	132	54.600	53.590	40.349	1.00	61.76	O
HETATM	2843	O	HOH	133	55.212	44.260	39.797	1.00	54.33	O
HETATM	2844	O	HOH	134	58.628	61.370	13.634	1.00	55.77	O
HETATM	2845	O	HOH	135	78.074	50.966	38.251	1.00	55.68	O
HETATM	2846	O	HOH	136	76.140	52.648	36.261	1.00	34.66	O
HETATM	2847	O	HOH	137	66.486	54.699	47.835	1.00	67.66	O
HETATM	2848	O	HOH	138	74.079	55.395	38.640	1.00	55.76	O
HETATM	2849	O	HOH	139	72.037	53.724	43.983	1.00	49.73	O
HETATM	2850	O	HOH	140	89.745	53.305	35.869	1.00	47.56	O
HETATM	2851	O	HOH	141	66.701	41.042	2.783	1.00	58.40	O
HETATM	2852	O	HOH	142	92.676	53.997	36.233	1.00	50.74	O
HETATM	2853	O	HOH	143	70.897	57.476	14.491	1.00	45.37	O
HETATM	2854	O	HOH	144	68.797	43.869	0.416	1.00	57.30	O
HETATM	2855	O	HOH	145	63.760	40.147	3.283	1.00	60.15	O
CONNECT	202	2514								
CONNECT	1501	1502								
CONNECT	1502	1501	1503	1505						
CONNECT	1503	1502	1504							
CONNECT	1504	1503	1507							
CONNECT	1505	1502	1506							
CONNECT	1506	1505								
CONNECT	1507	1504								
CONNECT	2514	202								
CONNECT	2688	2689	2690	2691	2692					
CONNECT	2689	2688								
CONNECT	2690	2688								
CONNECT	2691	2688								
CONNECT	2692	2688	2693							
CONNECT	2693	2692	2694							
CONNECT	2694	2693	2695	2696						
CONNECT	2695	2694	2700							
CONNECT	2696	2694	2697	2698						
CONNECT	2697	2696								
CONNECT	2698	2696	2699	2700						
CONNECT	2699	2698								
CONNECT	2700	2695	2698	2701						
CONNECT	2701	2700	2702	2710						
CONNECT	2702	2701	2703							
CONNECT	2703	2702	2704							
CONNECT	2704	2703	2705	2710						
CONNECT	2705	2704	2706	2707						
CONNECT	2706	2705								
CONNECT	2707	2705	2708							
CONNECT	2708	2707	2709							
CONNECT	2709	2708	2710							
CONNECT	2710	2701	2704	2709						
MASTER	521	0	3	14	18	0	0	6	2854	1 32 39

END

Figure 11

P-UC 5440

Page 1

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HEADER      OXIDOREDUCTASE                                08-AUG-02    1MEH
TITLE       INOSINE MONOPHOSPHATE DEHYDROGENASE (IMPDH) FROM
TITLE       2 TRITRICHOMONAS FOETUS WITH IMP AND MOA BOUND
COMPND      MOL_ID: 1;
COMPND      2 MOLECULE: INOSINE-5'-MONOPHOSPHATE DEHYDROGENASE;
COMPND      3 CHAIN: A;
COMPND      4 SYNONYM: IMP DEHYDROGENASE, IMPDH;
COMPND      5 EC: 1.1.1.205;
COMPND      6 ENGINEERED: YES
SOURCE      MOL_ID: 1;
SOURCE      2 ORGANISM_SCIENTIFIC: TRITRICHOMONAS FOETUS;
SOURCE      3 GENE: IMPDH;
SOURCE      4 EXPRESSION_SYSTEM: ESCHERICHIA COLI;
SOURCE      5 EXPRESSION_SYSTEM_COMMON: BACTERIA;
SOURCE      6 EXPRESSION_SYSTEM_STRAIN: H712;
SOURCE      7 EXPRESSION_SYSTEM_VECTOR_TYPE: PLASMID;
SOURCE      8 EXPRESSION_SYSTEM_PLASMID: PBACE
KEYWDS      ALPHA BETA BARREL
EXPDTA      X-RAY DIFFRACTION
AUTHOR      G.L.PROSISE,H.LUECKE
JRNL        AUTH    G.L.PROSISE,H.LUECKE
JRNL        TITL    CRYSTAL STRUCTURE OF T. FOETUS INOSINE
JRNL        TITL 2 MONOPHOSPHATE DEHYDROGENASE IN COMPLEX WITH
JRNL        TITL 3 SUBSTRATE, COFACTOR, AND ANALOGS:STRUCTURAL BASIS
JRNL        TITL 4 FOR THE RANDOM-IN ORDERED-OUT KINETIC MECHANISM
JRNL        REF     TO BE PUBLISHED
JRNL        REFN
REMARK      1
REMARK      2
REMARK      2 RESOLUTION. 1.95 ANGSTROMS.
REMARK      3
REMARK      3 REFINEMENT.
REMARK      3   PROGRAM       : CNS 1.1
REMARK      3   AUTHORS        : BRUNGER,ADAMS,CLORE,DELANO,GROS,GROSSE-
REMARK      3                   : KUNSTLEVE,JIANG,KUSZEWSKI,NILGES, PANNU,
REMARK      3                   : READ,RICE,SIMONSON,WARREN
REMARK      3
REMARK      3 REFINEMENT TARGET : ENGH & HUBER
REMARK      3
REMARK      3 DATA USED IN REFINEMENT.
REMARK      3   RESOLUTION RANGE HIGH (ANGSTROMS) : 1.95
REMARK      3   RESOLUTION RANGE LOW  (ANGSTROMS) : 19.98
REMARK      3   DATA CUTOFF              (SIGMA(F)) : 0.000
REMARK      3   OUTLIER CUTOFF HIGH (RMS (ABS(F))) : NULL
REMARK      3   COMPLETENESS (WORKING+TEST) (%) : 98.6
REMARK      3   NUMBER OF REFLECTIONS              : 44863
REMARK      3
REMARK      3 FIT TO DATA USED IN REFINEMENT.
REMARK      3   CROSS-VALIDATION METHOD              : THROUGHOUT
REMARK      3   FREE R VALUE TEST SET SELECTION      : RANDOM
REMARK      3   R VALUE                               (WORKING SET) : 0.243
REMARK      3   FREE R VALUE                               : 0.272
REMARK      3   FREE R VALUE TEST SET SIZE (%)       : 5.100
REMARK      3   FREE R VALUE TEST SET COUNT          : 2294
REMARK      3   ESTIMATED ERROR OF FREE R VALUE     : 0.006
REMARK      3
REMARK      3 FIT IN THE HIGHEST RESOLUTION BIN.

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REMARK 3 TOTAL NUMBER OF BINS USED : 6
REMARK 3 BIN RESOLUTION RANGE HIGH (A) : 1.95
REMARK 3 BIN RESOLUTION RANGE LOW (A) : 2.07
REMARK 3 BIN COMPLETENESS (WORKING+TEST) (%) : 96.70
REMARK 3 REFLECTIONS IN BIN (WORKING SET) : 6852
REMARK 3 BIN R VALUE (WORKING SET) : 0.2630
REMARK 3 BIN FREE R VALUE : 0.2960
REMARK 3 BIN FREE R VALUE TEST SET SIZE (%) : 4.60
REMARK 3 BIN FREE R VALUE TEST SET COUNT : 333
REMARK 3 ESTIMATED ERROR OF BIN FREE R VALUE : 0.016
REMARK 3
REMARK 3 NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK 3 PROTEIN ATOMS : 2709
REMARK 3 NUCLEIC ACID ATOMS : 0
REMARK 3 HETEROGEN ATOMS : 47
REMARK 3 SOLVENT ATOMS : 193
REMARK 3
REMARK 3 B VALUES.
REMARK 3 FROM WILSON PLOT (A**2) : 19.90
REMARK 3 MEAN B VALUE (OVERALL, A**2) : 32.70
REMARK 3 OVERALL ANISOTROPIC B VALUE.
REMARK 3 B11 (A**2) : 0.00000
REMARK 3 B22 (A**2) : 0.00000
REMARK 3 B33 (A**2) : 0.00000
REMARK 3 B12 (A**2) : 0.00000
REMARK 3 B13 (A**2) : 0.00000
REMARK 3 B23 (A**2) : 0.00000
REMARK 3
REMARK 3 ESTIMATED COORDINATE ERROR.
REMARK 3 ESD FROM LUZZATI PLOT (A) : 0.25
REMARK 3 ESD FROM SIGMAA (A) : 0.15
REMARK 3 LOW RESOLUTION CUTOFF (A) : 5.00
REMARK 3
REMARK 3 CROSS-VALIDATED ESTIMATED COORDINATE ERROR.
REMARK 3 ESD FROM C-V LUZZATI PLOT (A) : 0.29
REMARK 3 ESD FROM C-V SIGMAA (A) : 0.18
REMARK 3
REMARK 3 RMS DEVIATIONS FROM IDEAL VALUES.
REMARK 3 BOND LENGTHS (A) : 0.006
REMARK 3 BOND ANGLES (DEGREES) : 1.20
REMARK 3 DIHEDRAL ANGLES (DEGREES) : 22.30
REMARK 3 IMPROPER ANGLES (DEGREES) : 0.70
REMARK 3
REMARK 3 ISOTROPIC THERMAL MODEL : RESTRAINED
REMARK 3
REMARK 3 ISOTROPIC THERMAL FACTOR RESTRAINTS. RMS SIGMA
REMARK 3 MAIN-CHAIN BOND (A**2) : 0.810 ; 1.500
REMARK 3 MAIN-CHAIN ANGLE (A**2) : 1.440 ; 2.000
REMARK 3 SIDE-CHAIN BOND (A**2) : 1.060 ; 2.000
REMARK 3 SIDE-CHAIN ANGLE (A**2) : 1.700 ; 2.500
REMARK 3
REMARK 3 BULK SOLVENT MODELING.
REMARK 3 METHOD USED : FLAT MODEL
REMARK 3 KSOL : 0.40
REMARK 3 BSOL : 48.93
REMARK 3
REMARK 3 NCS MODEL : NULL

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REMARK 3
REMARK 3 NCS RESTRAINTS. RMS SIGMA/WEIGHT
REMARK 3 GROUP 1 POSITIONAL (A) : NULL ; NULL
REMARK 3 GROUP 1 B-FACTOR (A**2) : NULL ; NULL
REMARK 3
REMARK 3 PARAMETER FILE 1 : PROTEIN_REP.PARAM
REMARK 3 PARAMETER FILE 2 : PARAM.GNSOL
REMARK 3 PARAMETER FILE 3 : CIS_PEPTIDE.PARAM
REMARK 3 PARAMETER FILE 4 : MPA.PAR
REMARK 3 PARAMETER FILE 5 : IMP.PAR
REMARK 3 PARAMETER FILE 6 : NULL
REMARK 3 TOPOLOGY FILE 1 : PROTEIN.TOP
REMARK 3 TOPOLOGY FILE 2 : IMP.TOP
REMARK 3 TOPOLOGY FILE 3 : MPA.TOP
REMARK 3 TOPOLOGY FILE 4 : K.TOP
REMARK 3 TOPOLOGY FILE 5 : TOPH.GNSOL
REMARK 3 TOPOLOGY FILE 6 : NULL
REMARK 3
REMARK 3 OTHER REFINEMENT REMARKS: NULL
REMARK 4
REMARK 4 1MEH COMPLIES WITH FORMAT V. 2.3, 09-JULY-1998
REMARK 100
REMARK 100 THIS ENTRY HAS BEEN PROCESSED BY RCSB ON 16-AUG-2002.
REMARK 100 THE RCSB ID CODE IS RCSB016852.
REMARK 200
REMARK 200 EXPERIMENTAL DETAILS
REMARK 200 EXPERIMENT TYPE : X-RAY DIFFRACTION
REMARK 200 DATE OF DATA COLLECTION : 11-APR-2001
REMARK 200 TEMPERATURE (KELVIN) : 100.0
REMARK 200 PH : 7.50
REMARK 200 NUMBER OF CRYSTALS USED : 1
REMARK 200
REMARK 200 SYNCHROTRON (Y/N) : Y
REMARK 200 RADIATION SOURCE : SSRL
REMARK 200 BEAMLINE : 9-1
REMARK 200 X-RAY GENERATOR MODEL : NULL
REMARK 200 MONOCHROMATIC OR LAUE (M/L) : M
REMARK 200 WAVELENGTH OR RANGE (A) : 0.97
REMARK 200 MONOCHROMATOR : NULL
REMARK 200 OPTICS : NULL
REMARK 200
REMARK 200 DETECTOR TYPE : IMAGE PLATE
REMARK 200 DETECTOR MANUFACTURER : MARRESEARCH
REMARK 200 INTENSITY-INTEGRATION SOFTWARE : DENZO
REMARK 200 DATA SCALING SOFTWARE : SCALEPACK
REMARK 200
REMARK 200 NUMBER OF UNIQUE REFLECTIONS : 44997
REMARK 200 RESOLUTION RANGE HIGH (A) : 1.950
REMARK 200 RESOLUTION RANGE LOW (A) : 20.000
REMARK 200 REJECTION CRITERIA (SIGMA(I)) : NULL
REMARK 200
REMARK 200 OVERALL.
REMARK 200 COMPLETENESS FOR RANGE (%) : 99.0
REMARK 200 DATA REDUNDANCY : 5.400
REMARK 200 R MERGE (I) : 0.05700
REMARK 200 R SYM (I) : NULL
REMARK 200 <I/SIGMA(I)> FOR THE DATA SET : 25.9000

```

REMARK 200  
 REMARK 200 IN THE HIGHEST RESOLUTION SHELL.  
 REMARK 200 HIGHEST RESOLUTION SHELL, RANGE HIGH (A) : 1.95  
 REMARK 200 HIGHEST RESOLUTION SHELL, RANGE LOW (A) : 1.98  
 REMARK 200 COMPLETENESS FOR SHELL (%) : 95.7  
 REMARK 200 DATA REDUNDANCY IN SHELL : NULL  
 REMARK 200 R MERGE FOR SHELL (I) : 0.66000  
 REMARK 200 R SYM FOR SHELL (I) : NULL  
 REMARK 200  $\langle I/\Sigma(I) \rangle$  FOR SHELL : 1.820  
 REMARK 200  
 REMARK 200 DIFFRACTION PROTOCOL: SINGLE WAVELENGTH  
 REMARK 200 METHOD USED TO DETERMINE THE STRUCTURE: FOURIER SYNTHESIS  
 REMARK 200 SOFTWARE USED: CNS  
 REMARK 200 STARTING MODEL: PDB ENTRY 1AK5  
 REMARK 200  
 REMARK 200 REMARK: NULL  
 REMARK 280  
 REMARK 280 CRYSTAL  
 REMARK 280 SOLVENT CONTENT, VS (%) : NULL  
 REMARK 280 MATTHEWS COEFFICIENT, VM (ANGSTROMS\*\*3/DA) : NULL  
 REMARK 280  
 REMARK 280 CRYSTALLIZATION CONDITIONS: SODIUM MALONATE, TRIS, 2-  
 REMARK 280 MERCAPTOETHANOL, EDTA, GLYCEROL  
 REMARK 290  
 REMARK 290 CRYSTALLOGRAPHIC SYMMETRY  
 REMARK 290 SYMMETRY OPERATORS FOR SPACE GROUP: P 4 3 2  
 REMARK 290  

SYNOP	SYMMETRY
NNNNMM	OPERATOR
1555	X,Y,Z
2555	-X,-Y,Z
3555	-X,Y,-Z
4555	X,-Y,-Z
5555	Z,X,Y
6555	Z,-X,-Y
7555	-Z,-X,Y
8555	-Z,X,-Y
9555	Y,Z,X
10555	-Y,Z,-X
11555	Y,-Z,-X
12555	-Y,-Z,X
13555	Y,X,-Z
14555	-Y,-X,-Z
15555	Y,-X,Z
16555	-Y,X,Z
17555	X,Z,-Y
18555	-X,Z,Y
19555	-X,-Z,-Y
20555	X,-Z,Y
21555	Z,Y,-X
22555	Z,-Y,X
23555	-Z,Y,X
24555	-Z,-Y,-X

 REMARK 290  
 REMARK 290 WHERE NNN -> OPERATOR NUMBER  
 REMARK 290 MMM -> TRANSLATION VECTOR  
 REMARK 290

REMARK 290 CRYSTALLOGRAPHIC SYMMETRY TRANSFORMATIONS  
REMARK 290 THE FOLLOWING TRANSFORMATIONS OPERATE ON THE ATOM/HETATM  
REMARK 290 RECORDS IN THIS ENTRY TO PRODUCE CRYSTALLOGRAPHICALLY  
REMARK 290 RELATED MOLECULES.

REMARK 290	SMTRY1	1	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	1	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY3	1	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	2	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	2	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY3	2	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	3	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	3	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY3	3	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	4	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	4	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY3	4	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	5	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY2	5	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	5	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY1	6	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY2	6	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	6	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	7	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY2	7	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	7	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY1	8	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY2	8	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	8	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	9	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	9	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	9	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	10	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	10	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	10	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	11	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	11	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY3	11	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	12	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	12	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY3	12	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	13	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	13	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	13	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	14	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	14	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	14	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	15	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	15	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	15	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	16	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	16	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	16	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	17	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	17	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	17	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	18	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	18	0.000000	0.000000	1.000000	0.000000

```

REMARK 290 SMTRY3 18 0.000000 1.000000 0.000000 0.000000
REMARK 290 SMTRY1 19 -1.000000 0.000000 0.000000 0.000000
REMARK 290 SMTRY2 19 0.000000 0.000000 -1.000000 0.000000
REMARK 290 SMTRY3 19 0.000000 -1.000000 0.000000 0.000000
REMARK 290 SMTRY1 20 1.000000 0.000000 0.000000 0.000000
REMARK 290 SMTRY2 20 0.000000 0.000000 -1.000000 0.000000
REMARK 290 SMTRY3 20 0.000000 1.000000 0.000000 0.000000
REMARK 290 SMTRY1 21 0.000000 0.000000 1.000000 0.000000
REMARK 290 SMTRY2 21 0.000000 1.000000 0.000000 0.000000
REMARK 290 SMTRY3 21 -1.000000 0.000000 0.000000 0.000000
REMARK 290 SMTRY1 22 0.000000 0.000000 1.000000 0.000000
REMARK 290 SMTRY2 22 0.000000 -1.000000 0.000000 0.000000
REMARK 290 SMTRY3 22 1.000000 0.000000 0.000000 0.000000
REMARK 290 SMTRY1 23 0.000000 0.000000 -1.000000 0.000000
REMARK 290 SMTRY2 23 0.000000 1.000000 0.000000 0.000000
REMARK 290 SMTRY3 23 1.000000 0.000000 0.000000 0.000000
REMARK 290 SMTRY1 24 0.000000 0.000000 -1.000000 0.000000
REMARK 290 SMTRY2 24 0.000000 -1.000000 0.000000 0.000000
REMARK 290 SMTRY3 24 -1.000000 0.000000 0.000000 0.000000
REMARK 290
REMARK 290 REMARK: NULL
REMARK 300
REMARK 300 BIOMOLECULE: 1
REMARK 300 THIS ENTRY CONTAINS THE CRYSTALLOGRAPHIC ASYMMETRIC UNIT
REMARK 300 WHICH CONSISTS OF 1 CHAIN(S). SEE REMARK 350 FOR
REMARK 300 INFORMATION ON GENERATING THE BIOLOGICAL MOLECULE(S).
REMARK 350
REMARK 350 GENERATING THE BIOMOLECULE
REMARK 350 COORDINATES FOR A COMPLETE MULTIMER REPRESENTING THE KNOWN
REMARK 350 BIOLOGICALLY SIGNIFICANT OLIGOMERIZATION STATE OF THE
REMARK 350 MOLECULE CAN BE GENERATED BY APPLYING BIOMT TRANSFORMATIONS
REMARK 350 GIVEN BELOW. BOTH NON-CRYSTALLOGRAPHIC AND
REMARK 350 CRYSTALLOGRAPHIC OPERATIONS ARE GIVEN.
REMARK 350
REMARK 350 BIOMOLECULE: 1
REMARK 350 APPLY THE FOLLOWING TO CHAINS: A
REMARK 350 BIOMT1 1 1.000000 0.000000 0.000000 0.000000
REMARK 350 BIOMT2 1 0.000000 1.000000 0.000000 0.000000
REMARK 350 BIOMT3 1 0.000000 0.000000 1.000000 0.000000
REMARK 350 BIOMT1 2 -1.000000 0.000000 0.000000 153.48000
REMARK 350 BIOMT2 2 0.000000 -1.000000 0.000000 153.48000
REMARK 350 BIOMT3 2 0.000000 0.000000 1.000000 0.000000
REMARK 350 BIOMT1 3 0.000000 1.000000 0.000000 0.000000
REMARK 350 BIOMT2 3 -1.000000 0.000000 0.000000 153.48000
REMARK 350 BIOMT3 3 0.000000 0.000000 1.000000 0.000000
REMARK 350 BIOMT1 4 0.000000 -1.000000 0.000000 153.48000
REMARK 350 BIOMT2 4 1.000000 0.000000 0.000000 0.000000
REMARK 350 BIOMT3 4 0.000000 0.000000 1.000000 0.000000
REMARK 465
REMARK 465 MISSING RESIDUES
REMARK 465 THE FOLLOWING RESIDUES WERE NOT LOCATED IN THE
REMARK 465 EXPERIMENT. (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 465 IDENTIFIER; SSSEQ=SEQUENCE NUMBER; I=INSERTION CODE.)
REMARK 465
REMARK 465 M RES C SSSEQI
REMARK 465 MET A 1
REMARK 465 ASP A 107

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REMARK 465	SER A	108
REMARK 465	ASN A	109
REMARK 465	VAL A	110
REMARK 465	LYS A	111
REMARK 465	PRO A	112
REMARK 465	ASP A	113
REMARK 465	GLN A	114
REMARK 465	THR A	115
REMARK 465	PHE A	116
REMARK 465	ALA A	117
REMARK 465	ASP A	118
REMARK 465	VAL A	119
REMARK 465	LEU A	120
REMARK 465	ALA A	121
REMARK 465	ILE A	122
REMARK 465	SER A	123
REMARK 465	GLN A	124
REMARK 465	ARG A	125
REMARK 465	THR A	126
REMARK 465	THR A	127
REMARK 465	HIS A	128
REMARK 465	ASN A	129
REMARK 465	THR A	130
REMARK 465	VAL A	131
REMARK 465	ALA A	132
REMARK 465	VAL A	133
REMARK 465	THR A	134
REMARK 465	ASP A	135
REMARK 465	ASP A	136
REMARK 465	GLY A	137
REMARK 465	THR A	138
REMARK 465	PRO A	139
REMARK 465	HIS A	140
REMARK 465	GLY A	141
REMARK 465	VAL A	142
REMARK 465	LEU A	143
REMARK 465	LEU A	144
REMARK 465	GLY A	145
REMARK 465	LEU A	146
REMARK 465	VAL A	147
REMARK 465	THR A	148
REMARK 465	GLN A	149
REMARK 465	ARG A	150
REMARK 465	ASP A	151
REMARK 465	TYR A	152
REMARK 465	PRO A	153
REMARK 465	ILE A	154
REMARK 465	ASP A	155
REMARK 465	LEU A	156
REMARK 465	THR A	157
REMARK 465	GLN A	158
REMARK 465	THR A	159
REMARK 465	GLU A	160
REMARK 465	THR A	161
REMARK 465	LYS A	162
REMARK 465	VAL A	163
REMARK 465	SER A	164



REMARK 465	ASP A	165
REMARK 465	MET A	166
REMARK 465	MET A	167
REMARK 465	THR A	168
REMARK 465	PRO A	169
REMARK 465	PHE A	170
REMARK 465	SER A	171
REMARK 465	LYS A	172
REMARK 465	LEU A	173
REMARK 465	VAL A	174
REMARK 465	THR A	175
REMARK 465	ALA A	176
REMARK 465	HIS A	177
REMARK 465	GLN A	178
REMARK 465	ASP A	179
REMARK 465	THR A	180
REMARK 465	LYS A	181
REMARK 465	LEU A	182
REMARK 465	SER A	183
REMARK 465	GLU A	184
REMARK 465	ALA A	185
REMARK 465	ASN A	186
REMARK 465	LYS A	187
REMARK 465	ILE A	188
REMARK 465	ILE A	189
REMARK 465	TRP A	190
REMARK 465	GLU A	191
REMARK 465	LYS A	192
REMARK 465	LYS A	193
REMARK 465	LEU A	194
REMARK 465	ASN A	195
REMARK 465	ALA A	196
REMARK 465	LEU A	197
REMARK 465	PRO A	198
REMARK 465	ILE A	199
REMARK 465	ILE A	200
REMARK 465	ASP A	201
REMARK 465	ASP A	202
REMARK 465	ASP A	203
REMARK 465	GLN A	204
REMARK 465	HIS A	205
REMARK 465	LEU A	206
REMARK 465	ARG A	207
REMARK 465	TYR A	208
REMARK 465	ILE A	209
REMARK 465	VAL A	210
REMARK 465	PHE A	211
REMARK 465	ARG A	212
REMARK 465	LYS A	213
REMARK 465	ASP A	214
REMARK 465	TYR A	215
REMARK 465	ASP A	216
REMARK 465	ARG A	217
REMARK 465	SER A	218
REMARK 465	GLN A	219
REMARK 465	VAL A	220
REMARK 465	CYS A	221

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REMARK 465      GLN A    417
REMARK 465      ARG A    418
REMARK 465      TYR A    419
REMARK 465      ASP A    420
REMARK 465      LEU A    421
REMARK 465      GLY A    422
REMARK 465      GLY A    423
REMARK 465      LYS A    424
REMARK 465      GLN A    425
REMARK 465      LYS A    426
REMARK 465      LEU A    427
REMARK 465      SER A    428
REMARK 465      PHE A    429
REMARK 465      VAL A    484
REMARK 465      GLU A    485
REMARK 465      GLY A    486
REMARK 465      GLY A    487
REMARK 465      ALA A    488
REMARK 465      HIS A    489
REMARK 465      ASP A    490
REMARK 465      VAL A    491
REMARK 465      ILE A    492
REMARK 465      VAL A    493
REMARK 465      LYS A    494
REMARK 465      ASP A    495
REMARK 465      ARG A    496
REMARK 465      ILE A    497
REMARK 465      ASN A    498
REMARK 465      ASP A    499
REMARK 465      TYR A    500
REMARK 465      HIS A    501
REMARK 465      PRO A    502
REMARK 465      LYS A    503
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND LENGTHS
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE) ..
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,2(A3,1X,A1,I4,A1,1X,A4,3X),F6.3)
REMARK 500
REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991
REMARK 500
REMARK 500  M RES CSSEQI ATM1   RES CSSEQI ATM2   DEVIATION
REMARK 500    PRO A 354   CG    PRO A 354   CB     0.033
REMARK 500    MET A 373   CE    MET A 373   SD     0.035
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND ANGLES
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN

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REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).

REMARK 500

REMARK 500 STANDARD TABLE:

REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,3(1X,A4,2X),12X,F5.1)

REMARK 500

REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991

REMARK 500

REMARK 500 M RES CSSEQI ATM1 ATM2 ATM3

REMARK 500 GLY A 20 N - CA - C ANGL. DEV. = -8.3 DEGREES

REMARK 500 ILE A 27 N - CA - C ANGL. DEV. = -8.2 DEGREES

REMARK 500 GLN A 45 N - CA - C ANGL. DEV. = -8.3 DEGREES

REMARK 500 ILE A 52 N - CA - C ANGL. DEV. = -7.8 DEGREES

REMARK 500 PRO A 53 N - CA - C ANGL. DEV. = 7.0 DEGREES

REMARK 500 SER A 63 N - CA - C ANGL. DEV. = 8.6 DEGREES

REMARK 500 PHE A 266 N - CA - C ANGL. DEV. = -8.1 DEGREES

REMARK 500 LYS A 394 N - CA - C ANGL. DEV. = -7.7 DEGREES

REMARK 500 LYS A 472 N - CA - C ANGL. DEV. = 7.3 DEGREES

REMARK 500 LYS A 474 N - CA - C ANGL. DEV. = -8.1 DEGREES

REMARK 500 LEU A 477 N - CA - C ANGL. DEV. = -7.0 DEGREES

REMARK 900

REMARK 900 RELATED ENTRIES

REMARK 900 RELATED ID: 1AK5 RELATED DB: PDB

REMARK 900 INOSINE MONOPHOSPHATE DEHYDROGENASE (IMPDH) FROM

REMARK 900 TRITRICHOMONAS FOETUS

REMARK 900 RELATED ID: 1ME7 RELATED DB: PDB

REMARK 900 1ME7 CONTAINS THE SAME PROTEIN WITH RVP AND MOA BOUND

REMARK 900 RELATED ID: 1ME8 RELATED DB: PDB

REMARK 900 1ME8 CONTAINS THE SAME PROTEIN WITH RVP BOUND

REMARK 900 RELATED ID: 1ME9 RELATED DB: PDB

REMARK 900 1ME9 CONTAINS THE SAME PROTEIN WITH IMP BOUND

REMARK 900 RELATED ID: 1MEI RELATED DB: PDB

REMARK 900 1MEI CONTAINS THE SAME PROTEIN WITH XMP AND MYCOPHENOLIC

REMARK 900 ACID BOUND

REMARK 900 RELATED ID: 1MEW RELATED DB: PDB

REMARK 900 1MEW CONTAINS THE SAME PROTEIN WITH XMP AND NAD BOUND

DBREF 1MEH A 1 503 SWS P50097 IMDH\_TRIFO 1 503

SEQADV 1MEH CSO A 319 SWS P50097 CYS 319 MODIFIED RESIDUE

SEQRES 1 A 503 MET ALA LYS TYR TYR ASN GLU PRO CYS HIS THR PHE ASN

SEQRES 2 A 503 GLU TYR LEU LEU ILE PRO GLY LEU SER THR VAL ASP CYS

SEQRES 3 A 503 ILE PRO SER ASN VAL ASN LEU SER THR PRO LEU VAL LYS

SEQRES 4 A 503 PHE GLN LYS GLY GLN GLN SER GLU ILE ASN LEU LYS ILE

SEQRES 5 A 503 PRO LEU VAL SER ALA ILE MET GLN SER VAL SER GLY GLU

SEQRES 6 A 503 LYS MET ALA ILE ALA LEU ALA ARG GLU GLY GLY ILE SER

SEQRES 7 A 503 PHE ILE PHE GLY SER GLN SER ILE GLU SER GLN ALA ALA

SEQRES 8 A 503 MET VAL HIS ALA VAL LYS ASN PHE LYS ALA GLY PHE VAL

SEQRES 9 A 503 VAL SER ASP SER ASN VAL LYS PRO ASP GLN THR PHE ALA

SEQRES 10 A 503 ASP VAL LEU ALA ILE SER GLN ARG THR THR HIS ASN THR

SEQRES 11 A 503 VAL ALA VAL THR ASP ASP GLY THR PRO HIS GLY VAL LEU

SEQRES 12 A 503 LEU GLY LEU VAL THR GLN ARG ASP TYR PRO ILE ASP LEU

SEQRES 13 A 503 THR GLN THR GLU THR LYS VAL SER ASP MET MET THR PRO

SEQRES 14 A 503 PHE SER LYS LEU VAL THR ALA HIS GLN ASP THR LYS LEU

SEQRES 15 A 503 SER GLU ALA ASN LYS ILE ILE TRP GLU LYS LYS LEU ASN

SEQRES 16 A 503 ALA LEU PRO ILE ILE ASP ASP ASP GLN HIS LEU ARG TYR

SEQRES 17 A 503 ILE VAL PHE ARG LYS ASP TYR ASP ARG SER GLN VAL CYS

SEQRES 18 A 503 HIS ASN GLU LEU VAL ASP SER GLN LYS ARG TYR LEU VAL

SEQRES 19 A 503 GLY ALA GLY ILE ASN THR ARG ASP PHE ARG GLU ARG VAL

SEQRES 20 A 503 PRO ALA LEU VAL GLU ALA GLY ALA ASP VAL LEU CYS ILE

SEQRES	21	A	503	ASP	SER	SER	ASP	GLY	PHE	SER	GLU	TRP	GLN	LYS	ILE	THR		
SEQRES	22	A	503	ILE	GLY	TRP	ILE	ARG	GLU	LYS	TYR	GLY	ASP	LYS	VAL	LYS		
SEQRES	23	A	503	VAL	GLY	ALA	GLY	ASN	ILE	VAL	ASP	GLY	GLU	GLY	PHE	ARG		
SEQRES	24	A	503	TYR	LEU	ALA	ASP	ALA	GLY	ALA	ASP	PHE	ILE	LYS	ILE	GLY		
SEQRES	25	A	503	ILE	GLY	GLY	GLY	SER	ILE	CSO	ILE	THR	ARG	GLU	GLN	LYS		
SEQRES	26	A	503	GLY	ILE	GLY	ARG	GLY	GLN	ALA	THR	ALA	VAL	ILE	ASP	VAL		
SEQRES	27	A	503	VAL	ALA	GLU	ARG	ASN	LYS	TYR	PHE	GLU	GLU	THR	GLY	ILE		
SEQRES	28	A	503	TYR	ILE	PRO	VAL	CYS	SER	ASP	GLY	GLY	ILE	VAL	TYR	ASP		
SEQRES	29	A	503	TYR	HIS	MET	THR	LEU	ALA	LEU	ALA	MET	GLY	ALA	ASP	PHE		
SEQRES	30	A	503	ILE	MET	LEU	GLY	ARG	TYR	PHE	ALA	ARG	PHE	GLU	GLU	SER		
SEQRES	31	A	503	PRO	THR	ARG	LYS	VAL	THR	ILE	ASN	GLY	SER	VAL	MET	LYS		
SEQRES	32	A	503	GLU	TYR	TRP	GLY	GLU	GLY	SER	SER	ARG	ALA	ARG	ASN	TRP		
SEQRES	33	A	503	GLN	ARG	TYR	ASP	LEU	GLY	GLY	LYS	GLN	LYS	LEU	SER	PHE		
SEQRES	34	A	503	GLU	GLU	GLY	VAL	ASP	SER	TYR	VAL	PRO	TYR	ALA	GLY	LYS		
SEQRES	35	A	503	LEU	LYS	ASP	ASN	VAL	GLU	ALA	SER	LEU	ASN	LYS	VAL	LYS		
SEQRES	36	A	503	SER	THR	MET	CYS	ASN	CYS	GLY	ALA	LEU	THR	ILE	PRO	GLN		
SEQRES	37	A	503	LEU	GLN	SER	LYS	ALA	LYS	ILE	THR	LEU	VAL	SER	SER	VAL		
SEQRES	38	A	503	SER	ILE	VAL	GLU	GLY	GLY	ALA	HIS	ASP	VAL	ILE	VAL	LYS		
SEQRES	39	A	503	ASP	ARG	ILE	ASN	ASP	TYR	HIS	PRO	LYS						
MODRES	1MEH	CSO	A	319	CYS	S-HYDROXYCYSTEINE												
HET	CSO	A	319		7													
HET	K	A	900		1													
HET	IMP		602		23													
HET	MOA		600		23													
HETNAM			CSO	S-HYDROXYCYSTEINE														
HETNAM			K	POTASSIUM ION														
HETNAM			IMP	INOSINIC ACID														
HETNAM			MOA	MYCOPHENOLIC ACID														
HETSYN			MOA	6-(1,3-DIHYDRO-7-HYDROXY-5-METHOXY-4-METHYL-1-														
HETSYN	2	MOA	OXOISOBENZOFURAN-6-YL)-4-METHYL-4-HEXANOIC ACID															
FORMUL	1	CSO	C3 H7 N1 O3 S1															
FORMUL	2	K	K1 1+															
FORMUL	3	IMP	C10 H13 N4 O8 P1															
FORMUL	4	MOA	C17 H20 O6															
FORMUL	5	HOH	*193 (H2 O1)															
HELIX	1	1	THR	A	11	ASN	A	13	5									
HELIX	2	2	ILE	A	27	VAL	A	31	5									
HELIX	3	3	GLY	A	64	GLU	A	74	1									
HELIX	4	4	SER	A	85	ASN	A	98	1									
HELIX	5	5	ASP	A	242	GLY	A	254	1									
HELIX	6	6	SER	A	267	GLY	A	282	1									
HELIX	7	7	ASP	A	283	VAL	A	285	5									
HELIX	8	8	ASP	A	294	GLY	A	305	1									
HELIX	9	9	GLY	A	316	ARG	A	322	5									
HELIX	10	10	GLY	A	330	GLY	A	350	1									
HELIX	11	11	TYR	A	363	MET	A	373	1									
HELIX	12	12	GLY	A	381	ARG	A	386	1									
HELIX	13	13	LYS	A	442	CYS	A	461	1									
HELIX	14	14	THR	A	465	ALA	A	473	1									
SHEET	1	A	2	TYR	A	15	LEU	A	17	0								
SHEET	2	A	2	ILE	A	475	LEU	A	477	-1	O	THR	A	476	N	LEU	A	16
SHEET	1	B	2	THR	A	35	PRO	A	36	0								
SHEET	2	B	2	ASN	A	49	LEU	A	50	-1	O	LEU	A	50	N	THR	A	35
SHEET	1	C	2	PHE	A	40	GLN	A	41	0								
SHEET	2	C	2	ILE	A	351	TYR	A	352	-1	O	TYR	A	352	N	PHE	A	40
SHEET	1	D	9	LEU	A	54	SER	A	56	0								
SHEET	2	D	9	ILE	A	77	ILE	A	80	1	O	ILE	A	77	N	SER	A	56

SHEET	3	D 9	GLY A	235	ILE A	238	1	O	GLY A	237	N	ILE A	80	
SHEET	4	D 9	VAL A	257	ILE A	260	1	O	CYS A	259	N	ILE A	238	
SHEET	5	D 9	VAL A	287	ILE A	292	1	O	GLY A	288	N	LEU A	258	
SHEET	6	D 9	ILE A	309	ILE A	311	1	O	LYS A	310	N	ALA A	289	
SHEET	7	D 9	VAL A	355	ASP A	358	1	O	CYS A	356	N	ILE A	311	
SHEET	8	D 9	PHE A	377	LEU A	380	1	O	MET A	379	N	SER A	357	
SHEET	9	D 9	LEU A	54	SER A	56	1	N	VAL A	55	O	ILE A	378	
SHEET	1	E 3	LYS A	394	ILE A	397	0							
SHEET	2	E 3	SER A	400	TRP A	406	-1	O	MET A	402	N	VAL A	395	
SHEET	3	E 3	ASP A	434	PRO A	438	-1	O	SER A	435	N	TYR A	405	
SSBOND	1	CYS A	26	CYS A	459									
CISPEP	1	GLY A	290	ASN A	291			0			1.32			
CRYST1	153.480	153.480	153.480	90.00	90.00	90.00	P 4 3 2						24	
ORIGX1	1.000000	0.000000	0.000000			0.000000								
ORIGX2	0.000000	1.000000	0.000000			0.000000								
ORIGX3	0.000000	0.000000	1.000000			0.000000								
SCALE1	0.006516	0.000000	0.000000			0.000000								
SCALE2	0.000000	0.006516	0.000000			0.000000								
SCALE3	0.000000	0.000000	0.006516			0.000000								
ATOM	1	N	ALA A	2		54.528	74.306	36.657	1.00	34.86				N
ATOM	2	CA	ALA A	2		55.364	73.391	35.830	1.00	34.91				C
ATOM	3	C	ALA A	2		56.681	73.065	36.533	1.00	35.04				C
ATOM	4	O	ALA A	2		57.152	73.829	37.373	1.00	34.42				O
ATOM	5	CB	ALA A	2		55.650	74.032	34.477	1.00	34.75				C
ATOM	6	N	LYS A	3		57.264	71.925	36.179	1.00	35.15				N
ATOM	7	CA	LYS A	3		58.535	71.498	36.749	1.00	35.98				C
ATOM	8	C	LYS A	3		59.629	71.674	35.700	1.00	35.70				C
ATOM	9	O	LYS A	3		59.467	71.259	34.552	1.00	35.42				O
ATOM	10	CB	LYS A	3		58.459	70.029	37.187	1.00	36.70				C
ATOM	11	CG	LYS A	3		59.819	69.387	37.449	1.00	38.59				C
ATOM	12	CD	LYS A	3		59.689	67.979	38.016	1.00	39.69				C
ATOM	13	CE	LYS A	3		61.003	67.211	37.901	1.00	40.42				C
ATOM	14	NZ	LYS A	3		62.157	67.940	38.510	1.00	40.89				N
ATOM	15	N	TYR A	4		60.733	72.298	36.099	1.00	35.51				N
ATOM	16	CA	TYR A	4		61.864	72.539	35.210	1.00	36.45				C
ATOM	17	C	TYR A	4		63.081	71.752	35.695	1.00	37.94				C
ATOM	18	O	TYR A	4		63.055	71.166	36.775	1.00	38.19				O
ATOM	19	CB	TYR A	4		62.182	74.040	35.171	1.00	34.85				C
ATOM	20	CG	TYR A	4		61.071	74.870	34.566	1.00	33.25				C
ATOM	21	CD1	TYR A	4		60.904	74.944	33.182	1.00	32.63				C
ATOM	22	CD2	TYR A	4		60.158	75.545	35.375	1.00	32.51				C
ATOM	23	CE1	TYR A	4		59.850	75.670	32.618	1.00	31.87				C
ATOM	24	CE2	TYR A	4		59.099	76.273	34.821	1.00	32.01				C
ATOM	25	CZ	TYR A	4		58.953	76.328	33.445	1.00	31.47				C
ATOM	26	OH	TYR A	4		57.900	77.024	32.896	1.00	31.76				O
ATOM	27	N	TYR A	5		64.144	71.733	34.898	1.00	40.06				N
ATOM	28	CA	TYR A	5		65.351	70.998	35.272	1.00	41.80				C
ATOM	29	C	TYR A	5		66.588	71.888	35.355	1.00	42.70				C
ATOM	30	O	TYR A	5		66.654	72.941	34.719	1.00	42.98				O
ATOM	31	CB	TYR A	5		65.596	69.850	34.286	1.00	42.18				C
ATOM	32	CG	TYR A	5		64.446	68.871	34.224	1.00	42.27				C
ATOM	33	CD1	TYR A	5		63.238	69.225	33.630	1.00	42.61				C
ATOM	34	CD2	TYR A	5		64.551	67.603	34.797	1.00	42.57				C
ATOM	35	CE1	TYR A	5		62.160	68.347	33.611	1.00	42.81				C
ATOM	36	CE2	TYR A	5		63.478	66.715	34.783	1.00	42.46				C
ATOM	37	CZ	TYR A	5		62.285	67.096	34.188	1.00	42.90				C
ATOM	38	OH	TYR A	5		61.211	66.234	34.173	1.00	42.71				O

TABLE 3

ATOM	39	N	ASN	A	6	67.561	71.455	36.153	1.00	43.48	N
ATOM	40	CA	ASN	A	6	68.802	72.199	36.349	1.00	44.29	C
ATOM	41	C	ASN	A	6	69.702	72.229	35.117	1.00	44.03	C
ATOM	42	O	ASN	A	6	70.291	73.263	34.800	1.00	44.49	O
ATOM	43	CB	ASN	A	6	69.575	71.615	37.534	1.00	45.28	C
ATOM	44	CG	ASN	A	6	68.911	71.909	38.867	1.00	46.42	C
ATOM	45	OD1	ASN	A	6	69.164	71.229	39.863	1.00	47.16	O
ATOM	46	ND2	ASN	A	6	68.065	72.935	38.895	1.00	46.63	N
ATOM	47	N	GLU	A	7	69.812	71.102	34.421	1.00	43.48	N
ATOM	48	CA	GLU	A	7	70.659	71.039	33.233	1.00	42.70	C
ATOM	49	C	GLU	A	7	69.882	70.632	31.986	1.00	41.37	C
ATOM	50	O	GLU	A	7	68.858	69.955	32.073	1.00	40.86	O
ATOM	51	CB	GLU	A	7	71.803	70.041	33.446	1.00	44.08	C
ATOM	52	CG	GLU	A	7	72.774	70.384	34.577	1.00	45.95	C
ATOM	53	CD	GLU	A	7	73.516	71.695	34.358	1.00	46.95	C
ATOM	54	OE1	GLU	A	7	74.048	71.911	33.246	1.00	47.35	O
ATOM	55	OE2	GLU	A	7	73.575	72.507	35.307	1.00	48.10	O
ATOM	56	N	PRO	A	8	70.364	71.050	30.803	1.00	39.91	N
ATOM	57	CA	PRO	A	8	69.704	70.711	29.540	1.00	38.65	C
ATOM	58	C	PRO	A	8	70.048	69.265	29.203	1.00	37.69	C
ATOM	59	O	PRO	A	8	71.039	68.738	29.707	1.00	37.18	O
ATOM	60	CB	PRO	A	8	70.324	71.698	28.559	1.00	38.70	C
ATOM	61	CG	PRO	A	8	71.731	71.816	29.074	1.00	39.39	C
ATOM	62	CD	PRO	A	8	71.529	71.926	30.570	1.00	39.63	C
ATOM	63	N	CYS	A	9	69.235	68.616	28.372	1.00	36.47	N
ATOM	64	CA	CYS	A	9	69.517	67.235	28.005	1.00	35.60	C
ATOM	65	C	CYS	A	9	70.554	67.179	26.882	1.00	34.44	C
ATOM	66	O	CYS	A	9	70.712	68.138	26.116	1.00	34.18	O
ATOM	67	CB	CYS	A	9	68.226	66.497	27.617	1.00	36.20	C
ATOM	68	SG	CYS	A	9	67.191	67.270	26.369	1.00	39.57	S
ATOM	69	N	HIS	A	10	71.269	66.060	26.799	1.00	32.73	N
ATOM	70	CA	HIS	A	10	72.327	65.882	25.808	1.00	31.17	C
ATOM	71	C	HIS	A	10	72.184	64.600	24.990	1.00	30.48	C
ATOM	72	O	HIS	A	10	71.527	63.650	25.413	1.00	29.49	O
ATOM	73	CB	HIS	A	10	73.684	65.852	26.513	1.00	31.38	C
ATOM	74	CG	HIS	A	10	73.953	67.049	27.368	1.00	31.58	C
ATOM	75	ND1	HIS	A	10	74.340	68.264	26.847	1.00	32.08	N
ATOM	76	CD2	HIS	A	10	73.893	67.217	28.710	1.00	32.22	C
ATOM	77	CE1	HIS	A	10	74.511	69.129	27.832	1.00	31.71	C
ATOM	78	NE2	HIS	A	10	74.245	68.518	28.972	1.00	32.26	N
ATOM	79	N	THR	A	11	72.823	64.580	23.822	1.00	29.90	N
ATOM	80	CA	THR	A	11	72.796	63.417	22.936	1.00	29.38	C
ATOM	81	C	THR	A	11	74.134	62.681	23.054	1.00	28.79	C
ATOM	82	O	THR	A	11	75.057	63.175	23.699	1.00	28.16	O
ATOM	83	CB	THR	A	11	72.594	63.836	21.470	1.00	30.26	C
ATOM	84	OG1	THR	A	11	73.709	64.626	21.045	1.00	31.91	O
ATOM	85	CG2	THR	A	11	71.311	64.660	21.316	1.00	31.15	C
ATOM	86	N	PHE	A	12	74.240	61.510	22.433	1.00	28.35	N
ATOM	87	CA	PHE	A	12	75.474	60.730	22.493	1.00	28.54	C
ATOM	88	C	PHE	A	12	76.684	61.440	21.883	1.00	28.64	C
ATOM	89	O	PHE	A	12	77.813	61.252	22.340	1.00	27.98	O
ATOM	90	CB	PHE	A	12	75.282	59.367	21.816	1.00	27.87	C
ATOM	91	CG	PHE	A	12	74.379	58.428	22.578	1.00	27.50	C
ATOM	92	CD1	PHE	A	12	74.549	58.232	23.946	1.00	27.53	C
ATOM	93	CD2	PHE	A	12	73.374	57.724	21.923	1.00	27.61	C
ATOM	94	CE1	PHE	A	12	73.729	57.348	24.652	1.00	26.85	C
ATOM	95	CE2	PHE	A	12	72.549	56.834	22.621	1.00	27.24	C

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ATOM	96	CZ	PHE	A	12	72.729	56.648	23.985	1.00	26.78	C
ATOM	97	N	ASN	A	13	76.449	62.246	20.851	1.00	28.52	N
ATOM	98	CA	ASN	A	13	77.527	62.988	20.191	1.00	29.04	C
ATOM	99	C	ASN	A	13	78.243	63.954	21.131	1.00	28.55	C
ATOM	100	O	ASN	A	13	79.339	64.428	20.829	1.00	28.82	O
ATOM	101	CB	ASN	A	13	76.969	63.792	19.016	1.00	30.99	C
ATOM	102	CG	ASN	A	13	76.995	63.027	17.716	1.00	32.29	C
ATOM	103	OD1	ASN	A	13	76.291	63.379	16.772	1.00	34.44	O
ATOM	104	ND2	ASN	A	13	77.823	61.990	17.647	1.00	32.33	N
ATOM	105	N	GLU	A	14	77.625	64.255	22.265	1.00	27.53	N
ATOM	106	CA	GLU	A	14	78.218	65.190	23.212	1.00	27.62	C
ATOM	107	C	GLU	A	14	79.093	64.530	24.278	1.00	26.94	C
ATOM	108	O	GLU	A	14	79.548	65.199	25.203	1.00	27.17	O
ATOM	109	CB	GLU	A	14	77.114	66.003	23.890	1.00	28.36	C
ATOM	110	CG	GLU	A	14	76.224	66.769	22.912	1.00	29.57	C
ATOM	111	CD	GLU	A	14	75.134	67.557	23.608	1.00	30.53	C
ATOM	112	OE1	GLU	A	14	75.468	68.455	24.411	1.00	31.64	O
ATOM	113	OE2	GLU	A	14	73.941	67.281	23.352	1.00	31.42	O
ATOM	114	N	TYR	A	15	79.343	63.231	24.140	1.00	26.43	N
ATOM	115	CA	TYR	A	15	80.150	62.509	25.123	1.00	26.24	C
ATOM	116	C	TYR	A	15	81.325	61.721	24.555	1.00	26.03	C
ATOM	117	O	TYR	A	15	81.325	61.315	23.393	1.00	25.65	O
ATOM	118	CB	TYR	A	15	79.264	61.538	25.909	1.00	26.61	C
ATOM	119	CG	TYR	A	15	78.257	62.197	26.818	1.00	27.62	C
ATOM	120	CD1	TYR	A	15	78.604	62.578	28.112	1.00	28.33	C
ATOM	121	CD2	TYR	A	15	76.954	62.447	26.383	1.00	28.22	C
ATOM	122	CE1	TYR	A	15	77.682	63.188	28.958	1.00	29.62	C
ATOM	123	CE2	TYR	A	15	76.023	63.063	27.222	1.00	29.03	C
ATOM	124	CZ	TYR	A	15	76.395	63.429	28.505	1.00	29.97	C
ATOM	125	OH	TYR	A	15	75.495	64.057	29.335	1.00	31.38	O
ATOM	126	N	LEU	A	16	82.323	61.509	25.408	1.00	26.11	N
ATOM	127	CA	LEU	A	16	83.507	60.730	25.071	1.00	26.06	C
ATOM	128	C	LEU	A	16	83.925	59.997	26.336	1.00	25.29	C
ATOM	129	O	LEU	A	16	83.606	60.430	27.444	1.00	24.34	O
ATOM	130	CB	LEU	A	16	84.660	61.628	24.607	1.00	26.91	C
ATOM	131	CG	LEU	A	16	84.570	62.300	23.233	1.00	28.35	C
ATOM	132	CD1	LEU	A	16	85.820	63.150	23.016	1.00	27.97	C
ATOM	133	CD2	LEU	A	16	84.452	61.246	22.134	1.00	28.15	C
ATOM	134	N	LEU	A	17	84.634	58.889	26.165	1.00	24.72	N
ATOM	135	CA	LEU	A	17	85.119	58.097	27.290	1.00	24.73	C
ATOM	136	C	LEU	A	17	86.592	58.405	27.558	1.00	24.51	C
ATOM	137	O	LEU	A	17	87.386	58.553	26.626	1.00	24.84	O
ATOM	138	CB	LEU	A	17	84.970	56.603	26.983	1.00	24.74	C
ATOM	139	CG	LEU	A	17	83.551	56.029	26.964	1.00	25.01	C
ATOM	140	CD1	LEU	A	17	83.526	54.730	26.166	1.00	25.67	C
ATOM	141	CD2	LEU	A	17	83.086	55.796	28.391	1.00	25.40	C
ATOM	142	N	ILE	A	18	86.950	58.512	28.831	1.00	24.38	N
ATOM	143	CA	ILE	A	18	88.330	58.770	29.219	1.00	24.63	C
ATOM	144	C	ILE	A	18	88.900	57.408	29.613	1.00	24.85	C
ATOM	145	O	ILE	A	18	88.315	56.694	30.429	1.00	25.12	O
ATOM	146	CB	ILE	A	18	88.395	59.765	30.406	1.00	25.11	C
ATOM	147	CG1	ILE	A	18	87.927	61.147	29.926	1.00	25.53	C
ATOM	148	CG2	ILE	A	18	89.820	59.838	30.972	1.00	24.64	C
ATOM	149	CD1	ILE	A	18	87.909	62.211	31.010	1.00	27.24	C
ATOM	150	N	PRO	A	19	90.039	57.020	29.023	1.00	25.20	N
ATOM	151	CA	PRO	A	19	90.652	55.723	29.332	1.00	25.63	C
ATOM	152	C	PRO	A	19	90.914	55.433	30.805	1.00	25.58	C

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ATOM	153	O	PRO	A	19	91.147	56.339	31.602	1.00	25.92	O
ATOM	154	CB	PRO	A	19	91.949	55.746	28.520	1.00	25.89	C
ATOM	155	CG	PRO	A	19	91.597	56.623	27.346	1.00	26.34	C
ATOM	156	CD	PRO	A	19	90.828	57.744	28.009	1.00	25.19	C
ATOM	157	N	GLY	A	20	90.847	54.150	31.149	1.00	25.25	N
ATOM	158	CA	GLY	A	20	91.121	53.705	32.505	1.00	25.27	C
ATOM	159	C	GLY	A	20	92.328	52.800	32.362	1.00	25.31	C
ATOM	160	O	GLY	A	20	92.926	52.766	31.293	1.00	24.89	O
ATOM	161	N	LEU	A	21	92.701	52.067	33.402	1.00	25.69	N
ATOM	162	CA	LEU	A	21	93.858	51.184	33.293	1.00	26.65	C
ATOM	163	C	LEU	A	21	93.558	49.946	32.453	1.00	26.91	C
ATOM	164	O	LEU	A	21	92.641	49.185	32.761	1.00	26.58	O
ATOM	165	CB	LEU	A	21	94.341	50.752	34.685	1.00	26.99	C
ATOM	166	CG	LEU	A	21	95.498	49.739	34.720	1.00	27.71	C
ATOM	167	CD1	LEU	A	21	96.721	50.297	34.003	1.00	27.95	C
ATOM	168	CD2	LEU	A	21	95.838	49.412	36.174	1.00	28.33	C
ATOM	169	N	SER	A	22	94.328	49.756	31.383	1.00	27.24	N
ATOM	170	CA	SER	A	22	94.165	48.593	30.516	1.00	28.46	C
ATOM	171	C	SER	A	22	95.145	47.515	30.977	1.00	29.50	C
ATOM	172	O	SER	A	22	96.353	47.747	31.011	1.00	28.90	O
ATOM	173	CB	SER	A	22	94.468	48.952	29.060	1.00	28.09	C
ATOM	174	OG	SER	A	22	93.577	49.931	28.573	1.00	27.34	O
ATOM	175	N	THR	A	23	94.621	46.342	31.323	1.00	30.24	N
ATOM	176	CA	THR	A	23	95.448	45.231	31.790	1.00	31.35	C
ATOM	177	C	THR	A	23	95.902	44.337	30.642	1.00	31.61	C
ATOM	178	O	THR	A	23	95.257	44.283	29.595	1.00	32.12	O
ATOM	179	CB	THR	A	23	94.682	44.369	32.810	1.00	31.67	C
ATOM	180	OG1	THR	A	23	93.384	44.061	32.286	1.00	33.18	O
ATOM	181	CG2	THR	A	23	94.532	45.105	34.126	1.00	32.36	C
ATOM	182	N	VAL	A	24	97.011	43.628	30.842	1.00	32.54	N
ATOM	183	CA	VAL	A	24	97.537	42.746	29.805	1.00	33.28	C
ATOM	184	C	VAL	A	24	96.516	41.691	29.378	1.00	34.33	C
ATOM	185	O	VAL	A	24	96.585	41.166	28.269	1.00	34.00	O
ATOM	186	CB	VAL	A	24	98.837	42.025	30.267	1.00	33.25	C
ATOM	187	CG1	VAL	A	24	99.934	43.049	30.552	1.00	32.51	C
ATOM	188	CG2	VAL	A	24	98.563	41.185	31.499	1.00	33.40	C
ATOM	189	N	ASP	A	25	95.563	41.392	30.253	1.00	36.01	N
ATOM	190	CA	ASP	A	25	94.552	40.389	29.945	1.00	38.28	C
ATOM	191	C	ASP	A	25	93.382	40.901	29.106	1.00	38.45	C
ATOM	192	O	ASP	A	25	92.550	40.114	28.668	1.00	38.94	O
ATOM	193	CB	ASP	A	25	94.023	39.761	31.241	1.00	40.34	C
ATOM	194	CG	ASP	A	25	93.159	40.713	32.048	1.00	42.35	C
ATOM	195	OD1	ASP	A	25	91.955	40.834	31.745	1.00	44.31	O
ATOM	196	OD2	ASP	A	25	93.684	41.348	32.985	1.00	44.56	O
ATOM	197	N	CYS	A	26	93.311	42.206	28.860	1.00	38.57	N
ATOM	198	CA	CYS	A	26	92.195	42.714	28.070	1.00	38.08	C
ATOM	199	C	CYS	A	26	92.480	42.930	26.597	1.00	38.07	C
ATOM	200	O	CYS	A	26	93.094	43.923	26.204	1.00	38.02	O
ATOM	201	CB	CYS	A	26	91.652	44.026	28.639	1.00	37.39	C
ATOM	202	SG	CYS	A	26	89.947	44.430	28.092	1.00	36.98	S
ATOM	203	N	ILE	A	27	92.025	41.982	25.789	1.00	37.71	N
ATOM	204	CA	ILE	A	27	92.144	42.070	24.347	1.00	37.96	C
ATOM	205	C	ILE	A	27	90.721	41.819	23.871	1.00	37.64	C
ATOM	206	O	ILE	A	27	89.965	41.100	24.526	1.00	37.26	O
ATOM	207	CB	ILE	A	27	93.099	40.999	23.765	1.00	38.64	C
ATOM	208	CG1	ILE	A	27	92.780	39.627	24.361	1.00	38.53	C
ATOM	209	CG2	ILE	A	27	94.548	41.407	24.020	1.00	38.05	C



ATOM	210	CD1	ILE	A	27	93.629	38.504	23.789	1.00	39.94	C
ATOM	211	N	PRO	A	28	90.329	42.424	22.742	1.00	37.48	N
ATOM	212	CA	PRO	A	28	88.985	42.267	22.185	1.00	37.27	C
ATOM	213	C	PRO	A	28	88.399	40.862	22.281	1.00	37.00	C
ATOM	214	O	PRO	A	28	87.245	40.696	22.675	1.00	36.24	O
ATOM	215	CB	PRO	A	28	89.165	42.726	20.741	1.00	37.74	C
ATOM	216	CG	PRO	A	28	90.147	43.838	20.892	1.00	37.23	C
ATOM	217	CD	PRO	A	28	91.165	43.259	21.858	1.00	37.69	C
ATOM	218	N	SER	A	29	89.195	39.854	21.934	1.00	36.71	N
ATOM	219	CA	SER	A	29	88.724	38.473	21.960	1.00	36.44	C
ATOM	220	C	SER	A	29	88.358	37.934	23.340	1.00	35.69	C
ATOM	221	O	SER	A	29	87.608	36.964	23.444	1.00	35.87	O
ATOM	222	CB	SER	A	29	89.747	37.543	21.291	1.00	37.16	C
ATOM	223	OG	SER	A	29	91.019	37.620	21.907	1.00	38.53	O
ATOM	224	N	ASN	A	30	88.874	38.547	24.400	1.00	34.53	N
ATOM	225	CA	ASN	A	30	88.541	38.084	25.744	1.00	33.29	C
ATOM	226	C	ASN	A	30	87.358	38.850	26.342	1.00	31.44	C
ATOM	227	O	ASN	A	30	86.903	38.526	27.436	1.00	31.19	O
ATOM	228	CB	ASN	A	30	89.747	38.195	26.686	1.00	35.35	C
ATOM	229	CG	ASN	A	30	90.819	37.158	26.396	1.00	37.30	C
ATOM	230	OD1	ASN	A	30	90.517	36.011	26.061	1.00	38.46	O
ATOM	231	ND2	ASN	A	30	92.078	37.552	26.544	1.00	37.96	N
ATOM	232	N	VAL	A	31	86.861	39.858	25.628	1.00	28.79	N
ATOM	233	CA	VAL	A	31	85.730	40.645	26.119	1.00	27.05	C
ATOM	234	C	VAL	A	31	84.408	39.897	25.955	1.00	26.82	C
ATOM	235	O	VAL	A	31	84.095	39.394	24.880	1.00	26.06	O
ATOM	236	CB	VAL	A	31	85.637	42.011	25.400	1.00	26.53	C
ATOM	237	CG1	VAL	A	31	84.345	42.724	25.797	1.00	25.95	C
ATOM	238	CG2	VAL	A	31	86.845	42.873	25.773	1.00	24.71	C
ATOM	239	N	ASN	A	32	83.645	39.835	27.041	1.00	26.34	N
ATOM	240	CA	ASN	A	32	82.355	39.140	27.082	1.00	26.00	C
ATOM	241	C	ASN	A	32	81.227	40.164	26.965	1.00	25.15	C
ATOM	242	O	ASN	A	32	81.080	41.016	27.842	1.00	25.29	O
ATOM	243	CB	ASN	A	32	82.240	38.396	28.420	1.00	26.75	C
ATOM	244	CG	ASN	A	32	80.958	37.583	28.549	1.00	28.49	C
ATOM	245	OD1	ASN	A	32	79.957	37.851	27.884	1.00	28.21	O
ATOM	246	ND2	ASN	A	32	80.984	36.591	29.434	1.00	29.77	N
ATOM	247	N	LEU	A	33	80.429	40.079	25.901	1.00	24.40	N
ATOM	248	CA	LEU	A	33	79.329	41.024	25.700	1.00	24.28	C
ATOM	249	C	LEU	A	33	77.947	40.492	26.094	1.00	23.96	C
ATOM	250	O	LEU	A	33	76.922	41.024	25.664	1.00	23.48	O
ATOM	251	CB	LEU	A	33	79.300	41.511	24.242	1.00	24.79	C
ATOM	252	CG	LEU	A	33	80.520	42.316	23.774	1.00	25.38	C
ATOM	253	CD1	LEU	A	33	80.321	42.761	22.333	1.00	25.52	C
ATOM	254	CD2	LEU	A	33	80.721	43.529	24.675	1.00	25.70	C
ATOM	255	N	SER	A	34	77.920	39.445	26.913	1.00	23.29	N
ATOM	256	CA	SER	A	34	76.653	38.882	27.375	1.00	23.29	C
ATOM	257	C	SER	A	34	75.916	39.961	28.168	1.00	22.23	C
ATOM	258	O	SER	A	34	76.544	40.817	28.780	1.00	22.07	O
ATOM	259	CB	SER	A	34	76.909	37.670	28.278	1.00	23.70	C
ATOM	260	OG	SER	A	34	75.698	37.216	28.861	1.00	27.20	O
ATOM	261	N	THR	A	35	74.588	39.923	28.170	1.00	21.87	N
ATOM	262	CA	THR	A	35	73.822	40.925	28.902	1.00	20.75	C
ATOM	263	C	THR	A	35	72.396	40.419	29.149	1.00	20.94	C
ATOM	264	O	THR	A	35	71.826	39.699	28.320	1.00	21.27	O
ATOM	265	CB	THR	A	35	73.814	42.277	28.112	1.00	21.38	C
ATOM	266	OG1	THR	A	35	73.523	43.368	29.001	1.00	21.23	O

TABLE 3

ATOM	267	CG2	THR	A	35	72.786	42.239	26.991	1.00	20.66	C
ATOM	268	N	PRO	A	36	71.801	40.786	30.296	1.00	20.32	N
ATOM	269	CA	PRO	A	36	70.440	40.354	30.636	1.00	20.69	C
ATOM	270	C	PRO	A	36	69.338	41.049	29.841	1.00	20.70	C
ATOM	271	O	PRO	A	36	69.404	42.251	29.581	1.00	21.51	O
ATOM	272	CB	PRO	A	36	70.350	40.662	32.128	1.00	19.89	C
ATOM	273	CG	PRO	A	36	71.153	41.919	32.239	1.00	19.69	C
ATOM	274	CD	PRO	A	36	72.372	41.614	31.377	1.00	20.06	C
ATOM	275	N	LEU	A	37	68.317	40.285	29.471	1.00	21.00	N
ATOM	276	CA	LEU	A	37	67.197	40.830	28.718	1.00	21.84	C
ATOM	277	C	LEU	A	37	65.980	41.072	29.609	1.00	21.93	C
ATOM	278	O	LEU	A	37	65.257	42.049	29.416	1.00	21.26	O
ATOM	279	CB	LEU	A	37	66.798	39.882	27.582	1.00	22.24	C
ATOM	280	CG	LEU	A	37	65.696	40.404	26.650	1.00	22.01	C
ATOM	281	CD1	LEU	A	37	66.269	41.525	25.787	1.00	22.09	C
ATOM	282	CD2	LEU	A	37	65.164	39.289	25.777	1.00	22.26	C
ATOM	283	N	VAL	A	38	65.758	40.193	30.585	1.00	21.79	N
ATOM	284	CA	VAL	A	38	64.598	40.328	31.466	1.00	22.14	C
ATOM	285	C	VAL	A	38	64.950	40.384	32.950	1.00	22.71	C
ATOM	286	O	VAL	A	38	65.973	39.846	33.386	1.00	22.81	O
ATOM	287	CB	VAL	A	38	63.577	39.188	31.216	1.00	22.25	C
ATOM	288	CG1	VAL	A	38	63.064	39.267	29.776	1.00	22.95	C
ATOM	289	CG2	VAL	A	38	64.220	37.832	31.469	1.00	22.56	C
ATOM	290	N	LYS	A	39	64.081	41.032	33.719	1.00	22.22	N
ATOM	291	CA	LYS	A	39	64.296	41.230	35.144	1.00	22.61	C
ATOM	292	C	LYS	A	39	64.525	39.970	35.972	1.00	22.81	C
ATOM	293	O	LYS	A	39	64.018	38.892	35.655	1.00	22.94	O
ATOM	294	CB	LYS	A	39	63.130	42.019	35.750	1.00	22.84	C
ATOM	295	CG	LYS	A	39	61.814	41.259	35.802	1.00	23.34	C
ATOM	296	CD	LYS	A	39	60.751	42.061	36.548	1.00	25.09	C
ATOM	297	CE	LYS	A	39	59.425	41.313	36.606	1.00	25.38	C
ATOM	298	NZ	LYS	A	39	58.393	42.105	37.328	1.00	26.79	N
ATOM	299	N	PHE	A	40	65.297	40.140	37.041	1.00	23.12	N
ATOM	300	CA	PHE	A	40	65.620	39.065	37.973	1.00	24.28	C
ATOM	301	C	PHE	A	40	65.900	39.689	39.342	1.00	25.44	C
ATOM	302	O	PHE	A	40	66.044	40.914	39.456	1.00	26.48	O
ATOM	303	CB	PHE	A	40	66.848	38.272	37.492	1.00	22.73	C
ATOM	304	CG	PHE	A	40	68.061	39.123	37.217	1.00	22.77	C
ATOM	305	CD1	PHE	A	40	68.251	39.709	35.965	1.00	22.17	C
ATOM	306	CD2	PHE	A	40	69.011	39.347	38.212	1.00	22.45	C
ATOM	307	CE1	PHE	A	40	69.369	40.504	35.709	1.00	22.24	C
ATOM	308	CE2	PHE	A	40	70.133	40.139	37.971	1.00	22.30	C
ATOM	309	CZ	PHE	A	40	70.313	40.721	36.713	1.00	23.25	C
ATOM	310	N	GLN	A	41	65.968	38.850	40.373	1.00	25.99	N
ATOM	311	CA	GLN	A	41	66.233	39.300	41.741	1.00	27.32	C
ATOM	312	C	GLN	A	41	67.722	39.323	42.021	1.00	26.58	C
ATOM	313	O	GLN	A	41	68.494	38.644	41.350	1.00	26.05	O
ATOM	314	CB	GLN	A	41	65.580	38.360	42.767	1.00	28.63	C
ATOM	315	CG	GLN	A	41	64.073	38.418	42.811	1.00	32.62	C
ATOM	316	CD	GLN	A	41	63.568	39.766	43.273	1.00	34.57	C
ATOM	317	OE1	GLN	A	41	63.767	40.164	44.429	1.00	37.98	O
ATOM	318	NE2	GLN	A	41	62.915	40.485	42.375	1.00	35.13	N
ATOM	319	N	LYS	A	42	68.112	40.091	43.035	1.00	26.17	N
ATOM	320	CA	LYS	A	42	69.511	40.189	43.432	1.00	26.88	C
ATOM	321	C	LYS	A	42	70.104	38.790	43.624	1.00	26.18	C
ATOM	322	O	LYS	A	42	69.506	37.936	44.284	1.00	25.24	O
ATOM	323	CB	LYS	A	42	69.620	40.984	44.738	1.00	28.70	C

TABLE 3

ATOM	324	CG	LYS	A	42	71.020	41.076	45.320	1.00	30.39	C
ATOM	325	CD	LYS	A	42	71.018	41.936	46.581	1.00	32.90	C
ATOM	326	CE	LYS	A	42	72.414	42.059	47.174	1.00	34.17	C
ATOM	327	NZ	LYS	A	42	72.429	42.982	48.349	1.00	36.34	N
ATOM	328	N	GLY	A	43	71.271	38.561	43.031	1.00	25.61	N
ATOM	329	CA	GLY	A	43	71.929	37.272	43.157	1.00	25.50	C
ATOM	330	C	GLY	A	43	71.574	36.267	42.079	1.00	24.98	C
ATOM	331	O	GLY	A	43	72.260	35.260	41.916	1.00	25.00	O
ATOM	332	N	GLN	A	44	70.500	36.523	41.343	1.00	24.55	N
ATOM	333	CA	GLN	A	44	70.092	35.606	40.287	1.00	24.65	C
ATOM	334	C	GLN	A	44	70.707	36.017	38.961	1.00	25.02	C
ATOM	335	O	GLN	A	44	71.394	37.029	38.868	1.00	24.74	O
ATOM	336	CB	GLN	A	44	68.569	35.610	40.117	1.00	24.79	C
ATOM	337	CG	GLN	A	44	67.766	35.374	41.390	1.00	24.46	C
ATOM	338	CD	GLN	A	44	66.270	35.328	41.124	1.00	25.55	C
ATOM	339	OE1	GLN	A	44	65.758	36.043	40.255	1.00	24.07	O
ATOM	340	NE2	GLN	A	44	65.557	34.499	41.884	1.00	24.73	N
ATOM	341	N	GLN	A	45	70.452	35.208	37.942	1.00	25.65	N
ATOM	342	CA	GLN	A	45	70.894	35.490	36.584	1.00	26.47	C
ATOM	343	C	GLN	A	45	69.584	35.679	35.834	1.00	25.54	C
ATOM	344	O	GLN	A	45	68.559	35.137	36.242	1.00	24.56	O
ATOM	345	CB	GLN	A	45	71.650	34.298	35.982	1.00	28.94	C
ATOM	346	CG	GLN	A	45	73.051	34.092	36.532	1.00	31.95	C
ATOM	347	CD	GLN	A	45	73.946	35.287	36.280	1.00	34.21	C
ATOM	348	OE1	GLN	A	45	74.117	35.716	35.137	1.00	36.26	O
ATOM	349	NE2	GLN	A	45	74.525	35.834	37.348	1.00	35.09	N
ATOM	350	N	SER	A	46	69.597	36.458	34.759	1.00	24.88	N
ATOM	351	CA	SER	A	46	68.379	36.643	33.986	1.00	24.59	C
ATOM	352	C	SER	A	46	68.038	35.329	33.287	1.00	25.11	C
ATOM	353	O	SER	A	46	68.937	34.576	32.907	1.00	24.15	O
ATOM	354	CB	SER	A	46	68.567	37.732	32.931	1.00	23.51	C
ATOM	355	OG	SER	A	46	67.375	37.895	32.188	1.00	22.66	O
ATOM	356	N	GLU	A	47	66.747	35.052	33.122	1.00	26.17	N
ATOM	357	CA	GLU	A	47	66.318	33.831	32.443	1.00	27.54	C
ATOM	358	C	GLU	A	47	66.708	33.896	30.970	1.00	27.30	C
ATOM	359	O	GLU	A	47	66.831	32.871	30.303	1.00	27.84	O
ATOM	360	CB	GLU	A	47	64.803	33.649	32.564	1.00	29.20	C
ATOM	361	CG	GLU	A	47	64.330	33.359	33.977	1.00	32.39	C
ATOM	362	CD	GLU	A	47	62.821	33.411	34.104	1.00	34.34	C
ATOM	363	OE1	GLU	A	47	62.145	32.508	33.566	1.00	35.91	O
ATOM	364	OE2	GLU	A	47	62.314	34.363	34.735	1.00	35.54	O
ATOM	365	N	ILE	A	48	66.890	35.109	30.458	1.00	26.04	N
ATOM	366	CA	ILE	A	48	67.284	35.284	29.063	1.00	25.89	C
ATOM	367	C	ILE	A	48	68.454	36.254	28.971	1.00	25.55	C
ATOM	368	O	ILE	A	48	68.353	37.409	29.387	1.00	25.22	O
ATOM	369	CB	ILE	A	48	66.133	35.844	28.193	1.00	26.14	C
ATOM	370	CG1	ILE	A	48	64.913	34.921	28.255	1.00	27.04	C
ATOM	371	CG2	ILE	A	48	66.604	35.977	26.747	1.00	25.69	C
ATOM	372	CD1	ILE	A	48	63.686	35.502	27.561	1.00	28.89	C
ATOM	373	N	ASN	A	49	69.567	35.775	28.431	1.00	24.84	N
ATOM	374	CA	ASN	A	49	70.750	36.603	28.277	1.00	24.41	C
ATOM	375	C	ASN	A	49	71.148	36.668	26.813	1.00	24.16	C
ATOM	376	O	ASN	A	49	71.297	35.637	26.157	1.00	24.28	O
ATOM	377	CB	ASN	A	49	71.914	36.030	29.095	1.00	24.39	C
ATOM	378	CG	ASN	A	49	71.693	36.157	30.592	1.00	25.36	C
ATOM	379	OD1	ASN	A	49	71.883	37.227	31.175	1.00	23.83	O
ATOM	380	ND2	ASN	A	49	71.273	35.065	31.219	1.00	25.54	N

TABLE 3

ATOM	381	N	LEU	A	50	71.298	37.879	26.292	1.00	23.32	N
ATOM	382	CA	LEU	A	50	71.724	38.045	24.909	1.00	23.00	C
ATOM	383	C	LEU	A	50	73.222	37.769	24.916	1.00	23.10	C
ATOM	384	O	LEU	A	50	73.873	37.953	25.945	1.00	22.63	O
ATOM	385	CB	LEU	A	50	71.492	39.484	24.442	1.00	22.34	C
ATOM	386	CG	LEU	A	50	70.087	40.075	24.569	1.00	22.93	C
ATOM	387	CD1	LEU	A	50	70.100	41.515	24.045	1.00	23.23	C
ATOM	388	CD2	LEU	A	50	69.093	39.221	23.787	1.00	23.68	C
ATOM	389	N	LYS	A	51	73.769	37.322	23.788	1.00	23.53	N
ATOM	390	CA	LYS	A	51	75.201	37.074	23.707	1.00	24.58	C
ATOM	391	C	LYS	A	51	75.900	38.353	23.240	1.00	24.53	C
ATOM	392	O	LYS	A	51	77.099	38.525	23.448	1.00	24.51	O
ATOM	393	CB	LYS	A	51	75.492	35.878	22.789	1.00	26.26	C
ATOM	394	CG	LYS	A	51	75.057	34.561	23.438	1.00	27.65	C
ATOM	395	CD	LYS	A	51	75.469	33.337	22.639	1.00	29.52	C
ATOM	396	CE	LYS	A	51	74.978	32.065	23.324	1.00	30.43	C
ATOM	397	NZ	LYS	A	51	75.354	30.839	22.555	1.00	32.78	N
ATOM	398	N	ILE	A	52	75.139	39.240	22.596	1.00	23.97	N
ATOM	399	CA	ILE	A	52	75.641	40.555	22.192	1.00	23.86	C
ATOM	400	C	ILE	A	52	74.496	41.505	22.570	1.00	23.49	C
ATOM	401	O	ILE	A	52	73.322	41.143	22.469	1.00	24.41	O
ATOM	402	CB	ILE	A	52	75.985	40.667	20.678	1.00	24.09	C
ATOM	403	CG1	ILE	A	52	74.760	40.365	19.815	1.00	24.55	C
ATOM	404	CG2	ILE	A	52	77.174	39.749	20.352	1.00	24.63	C
ATOM	405	CD1	ILE	A	52	74.985	40.668	18.337	1.00	25.99	C
ATOM	406	N	PRO	A	53	74.821	42.722	23.019	1.00	22.93	N
ATOM	407	CA	PRO	A	53	73.827	43.720	23.437	1.00	22.98	C
ATOM	408	C	PRO	A	53	73.051	44.482	22.363	1.00	23.03	C
ATOM	409	O	PRO	A	53	72.673	45.631	22.586	1.00	23.64	O
ATOM	410	CB	PRO	A	53	74.654	44.657	24.305	1.00	22.57	C
ATOM	411	CG	PRO	A	53	75.944	44.714	23.542	1.00	23.54	C
ATOM	412	CD	PRO	A	53	76.190	43.246	23.194	1.00	23.09	C
ATOM	413	N	LEU	A	54	72.798	43.853	21.220	1.00	22.71	N
ATOM	414	CA	LEU	A	54	72.073	44.521	20.138	1.00	23.22	C
ATOM	415	C	LEU	A	54	70.760	43.834	19.777	1.00	22.95	C
ATOM	416	O	LEU	A	54	70.715	42.615	19.596	1.00	22.05	O
ATOM	417	CB	LEU	A	54	72.940	44.589	18.870	1.00	23.59	C
ATOM	418	CG	LEU	A	54	74.366	45.141	18.963	1.00	23.98	C
ATOM	419	CD1	LEU	A	54	75.015	45.095	17.583	1.00	24.50	C
ATOM	420	CD2	LEU	A	54	74.343	46.567	19.494	1.00	24.21	C
ATOM	421	N	VAL	A	55	69.695	44.625	19.675	1.00	22.53	N
ATOM	422	CA	VAL	A	55	68.392	44.104	19.284	1.00	22.49	C
ATOM	423	C	VAL	A	55	67.871	45.017	18.170	1.00	22.61	C
ATOM	424	O	VAL	A	55	68.116	46.229	18.183	1.00	22.47	O
ATOM	425	CB	VAL	A	55	67.387	44.060	20.475	1.00	22.79	C
ATOM	426	CG1	VAL	A	55	68.032	43.361	21.673	1.00	22.48	C
ATOM	427	CG2	VAL	A	55	66.924	45.452	20.845	1.00	22.85	C
ATOM	428	N	SER	A	56	67.180	44.438	17.193	1.00	22.42	N
ATOM	429	CA	SER	A	56	66.665	45.232	16.080	1.00	22.42	C
ATOM	430	C	SER	A	56	65.300	45.823	16.410	1.00	22.63	C
ATOM	431	O	SER	A	56	64.485	45.200	17.094	1.00	23.01	O
ATOM	432	CB	SER	A	56	66.611	44.389	14.794	1.00	22.36	C
ATOM	433	OG	SER	A	56	65.832	43.220	14.959	1.00	23.60	O
ATOM	434	N	ALA	A	57	65.076	47.039	15.921	1.00	22.62	N
ATOM	435	CA	ALA	A	57	63.853	47.799	16.163	1.00	22.97	C
ATOM	436	C	ALA	A	57	62.557	47.117	15.730	1.00	23.76	C
ATOM	437	O	ALA	A	57	62.533	46.338	14.781	1.00	24.23	O

TABLE 3

ATOM	438	CB	ALA	A	57	63.971	49.174	15.496	1.00	21.89	C
ATOM	439	N	ILE	A	58	61.480	47.430	16.444	1.00	24.06	N
ATOM	440	CA	ILE	A	58	60.161	46.860	16.174	1.00	24.95	C
ATOM	441	C	ILE	A	58	59.552	47.647	15.016	1.00	25.14	C
ATOM	442	O	ILE	A	58	58.567	48.369	15.189	1.00	25.13	O
ATOM	443	CB	ILE	A	58	59.259	46.984	17.427	1.00	25.04	C
ATOM	444	CG1	ILE	A	58	60.035	46.504	18.661	1.00	25.04	C
ATOM	445	CG2	ILE	A	58	57.992	46.149	17.260	1.00	25.28	C
ATOM	446	CD1	ILE	A	58	59.239	46.529	19.950	1.00	24.84	C
ATOM	447	N	MET	A	59	60.143	47.483	13.834	1.00	25.33	N
ATOM	448	CA	MET	A	59	59.716	48.220	12.647	1.00	25.63	C
ATOM	449	C	MET	A	59	59.521	47.358	11.398	1.00	25.77	C
ATOM	450	O	MET	A	59	60.257	46.397	11.171	1.00	25.17	O
ATOM	451	CB	MET	A	59	60.750	49.310	12.354	1.00	25.44	C
ATOM	452	CG	MET	A	59	61.021	50.234	13.540	1.00	24.70	C
ATOM	453	SD	MET	A	59	62.394	51.382	13.288	1.00	24.28	S
ATOM	454	CE	MET	A	59	61.721	52.448	11.981	1.00	24.30	C
ATOM	455	N	GLN	A	60	58.533	47.724	10.585	1.00	26.54	N
ATOM	456	CA	GLN	A	60	58.234	47.005	9.345	1.00	27.32	C
ATOM	457	C	GLN	A	60	59.464	46.961	8.443	1.00	27.38	C
ATOM	458	O	GLN	A	60	59.719	45.963	7.771	1.00	27.43	O
ATOM	459	CB	GLN	A	60	57.109	47.701	8.564	1.00	27.95	C
ATOM	460	CG	GLN	A	60	55.838	47.994	9.337	1.00	29.68	C
ATOM	461	CD	GLN	A	60	54.802	48.717	8.482	1.00	31.25	C
ATOM	462	OE1	GLN	A	60	55.149	49.525	7.616	1.00	31.26	O
ATOM	463	NE2	GLN	A	60	53.526	48.442	8.735	1.00	31.01	N
ATOM	464	N	SER	A	61	60.220	48.053	8.427	1.00	27.19	N
ATOM	465	CA	SER	A	61	61.398	48.145	7.573	1.00	27.60	C
ATOM	466	C	SER	A	61	62.682	47.598	8.193	1.00	27.60	C
ATOM	467	O	SER	A	61	63.773	47.818	7.662	1.00	28.23	O
ATOM	468	CB	SER	A	61	61.620	49.602	7.152	1.00	27.83	C
ATOM	469	OG	SER	A	61	61.955	50.422	8.261	1.00	29.04	O
ATOM	470	N	VAL	A	62	62.560	46.867	9.296	1.00	26.86	N
ATOM	471	CA	VAL	A	62	63.745	46.337	9.957	1.00	26.42	C
ATOM	472	C	VAL	A	62	63.665	44.883	10.402	1.00	26.63	C
ATOM	473	O	VAL	A	62	64.432	44.045	9.938	1.00	27.23	O
ATOM	474	CB	VAL	A	62	64.098	47.181	11.210	1.00	26.30	C
ATOM	475	CG1	VAL	A	62	65.342	46.618	11.893	1.00	25.75	C
ATOM	476	CG2	VAL	A	62	64.310	48.631	10.820	1.00	25.78	C
ATOM	477	N	SER	A	63	62.725	44.585	11.291	1.00	26.87	N
ATOM	478	CA	SER	A	63	62.621	43.248	11.849	1.00	26.97	C
ATOM	479	C	SER	A	63	61.630	42.252	11.253	1.00	27.37	C
ATOM	480	O	SER	A	63	60.534	42.048	11.778	1.00	26.24	O
ATOM	481	CB	SER	A	63	62.394	43.364	13.359	1.00	27.27	C
ATOM	482	OG	SER	A	63	63.447	44.106	13.965	1.00	27.97	O
ATOM	483	N	GLY	A	64	62.049	41.627	10.158	1.00	27.73	N
ATOM	484	CA	GLY	A	64	61.248	40.610	9.507	1.00	28.60	C
ATOM	485	C	GLY	A	64	61.899	39.284	9.859	1.00	29.32	C
ATOM	486	O	GLY	A	64	62.870	39.257	10.623	1.00	28.30	O
ATOM	487	N	GLU	A	65	61.387	38.190	9.304	1.00	29.97	N
ATOM	488	CA	GLU	A	65	61.912	36.855	9.584	1.00	31.24	C
ATOM	489	C	GLU	A	65	63.413	36.688	9.339	1.00	30.93	C
ATOM	490	O	GLU	A	65	64.131	36.167	10.188	1.00	30.06	O
ATOM	491	CB	GLU	A	65	61.147	35.811	8.760	1.00	33.66	C
ATOM	492	CG	GLU	A	65	60.983	36.196	7.292	1.00	37.41	C
ATOM	493	CD	GLU	A	65	59.788	37.106	7.051	1.00	39.43	C
ATOM	494	OE1	GLU	A	65	58.650	36.587	7.069	1.00	41.83	O

ATOM	495	OE2	GLU	A	65	59.978	38.331	6.846	1.00	40.38	O
ATOM	496	N	LYS	A	66	63.884	37.123	8.176	1.00	30.29	N
ATOM	497	CA	LYS	A	66	65.295	36.996	7.837	1.00	30.29	C
ATOM	498	C	LYS	A	66	66.221	37.768	8.781	1.00	29.26	C
ATOM	499	O	LYS	A	66	67.294	37.284	9.140	1.00	28.41	O
ATOM	500	CB	LYS	A	66	65.528	37.423	6.380	1.00	31.58	C
ATOM	501	CG	LYS	A	66	64.731	38.637	5.917	1.00	33.89	C
ATOM	502	CD	LYS	A	66	63.214	38.395	5.941	1.00	34.74	C
ATOM	503	CE	LYS	A	66	62.489	39.441	5.136	1.00	35.36	C
ATOM	504	NZ	LYS	A	66	62.985	39.417	3.718	1.00	34.63	N
ATOM	505	N	MET	A	67	65.807	38.962	9.185	1.00	28.14	N
ATOM	506	CA	MET	A	67	66.606	39.765	10.104	1.00	26.95	C
ATOM	507	C	MET	A	67	66.722	39.019	11.433	1.00	26.58	C
ATOM	508	O	MET	A	67	67.812	38.889	11.997	1.00	25.12	O
ATOM	509	CB	MET	A	67	65.939	41.125	10.327	1.00	27.01	C
ATOM	510	CG	MET	A	67	66.628	42.020	11.347	1.00	25.99	C
ATOM	511	SD	MET	A	67	68.293	42.472	10.859	1.00	26.26	S
ATOM	512	CE	MET	A	67	67.950	43.550	9.432	1.00	25.77	C
ATOM	513	N	ALA	A	68	65.587	38.513	11.910	1.00	26.72	N
ATOM	514	CA	ALA	A	68	65.524	37.791	13.174	1.00	26.82	C
ATOM	515	C	ALA	A	68	66.457	36.590	13.203	1.00	27.20	C
ATOM	516	O	ALA	A	68	67.092	36.315	14.217	1.00	27.21	O
ATOM	517	CB	ALA	A	68	64.092	37.350	13.452	1.00	26.91	C
ATOM	518	N	ILE	A	69	66.532	35.867	12.092	1.00	27.20	N
ATOM	519	CA	ILE	A	69	67.403	34.702	12.011	1.00	27.15	C
ATOM	520	C	ILE	A	69	68.870	35.125	11.980	1.00	26.50	C
ATOM	521	O	ILE	A	69	69.700	34.568	12.695	1.00	27.23	O
ATOM	522	CB	ILE	A	69	67.089	33.867	10.747	1.00	27.71	C
ATOM	523	CG1	ILE	A	69	65.692	33.250	10.870	1.00	28.00	C
ATOM	524	CG2	ILE	A	69	68.144	32.787	10.558	1.00	27.79	C
ATOM	525	CD1	ILE	A	69	65.121	32.737	9.547	1.00	29.43	C
ATOM	526	N	ALA	A	70	69.184	36.116	11.154	1.00	25.73	N
ATOM	527	CA	ALA	A	70	70.556	36.592	11.029	1.00	25.41	C
ATOM	528	C	ALA	A	70	71.109	37.181	12.325	1.00	25.00	C
ATOM	529	O	ALA	A	70	72.260	36.936	12.683	1.00	24.51	O
ATOM	530	CB	ALA	A	70	70.645	37.627	9.914	1.00	25.47	C
ATOM	531	N	LEU	A	71	70.292	37.961	13.025	1.00	24.62	N
ATOM	532	CA	LEU	A	71	70.736	38.580	14.266	1.00	24.36	C
ATOM	533	C	LEU	A	71	70.878	37.541	15.372	1.00	24.81	C
ATOM	534	O	LEU	A	71	71.850	37.562	16.121	1.00	25.09	O
ATOM	535	CB	LEU	A	71	69.759	39.680	14.690	1.00	23.62	C
ATOM	536	CG	LEU	A	71	70.116	40.466	15.960	1.00	23.09	C
ATOM	537	CD1	LEU	A	71	71.583	40.872	15.932	1.00	22.51	C
ATOM	538	CD2	LEU	A	71	69.220	41.701	16.053	1.00	22.83	C
ATOM	539	N	ALA	A	72	69.916	36.629	15.471	1.00	25.59	N
ATOM	540	CA	ALA	A	72	69.982	35.583	16.490	1.00	26.49	C
ATOM	541	C	ALA	A	72	71.246	34.742	16.284	1.00	27.18	C
ATOM	542	O	ALA	A	72	71.868	34.287	17.249	1.00	26.99	O
ATOM	543	CB	ALA	A	72	68.739	34.699	16.421	1.00	26.25	C
ATOM	544	N	ARG	A	73	71.624	34.540	15.025	1.00	27.93	N
ATOM	545	CA	ARG	A	73	72.822	33.765	14.707	1.00	28.79	C
ATOM	546	C	ARG	A	73	74.084	34.417	15.267	1.00	28.77	C
ATOM	547	O	ARG	A	73	75.058	33.729	15.573	1.00	28.68	O
ATOM	548	CB	ARG	A	73	72.965	33.596	13.191	1.00	30.52	C
ATOM	549	CG	ARG	A	73	72.054	32.535	12.601	1.00	31.89	C
ATOM	550	CD	ARG	A	73	72.198	32.469	11.089	1.00	33.48	C
ATOM	551	NE	ARG	A	73	71.517	31.303	10.534	1.00	35.10	N

ATOM	552	CZ	ARG	A	73	71.257	31.135	9.241	1.00	36.83	C
ATOM	553	NH1	ARG	A	73	71.618	32.061	8.360	1.00	37.07	N
ATOM	554	NH2	ARG	A	73	70.642	30.034	8.825	1.00	37.30	N
ATOM	555	N	GLU	A	74	74.064	35.741	15.401	1.00	28.39	N
ATOM	556	CA	GLU	A	74	75.210	36.470	15.933	1.00	28.09	C
ATOM	557	C	GLU	A	74	75.100	36.720	17.444	1.00	27.22	C
ATOM	558	O	GLU	A	74	75.977	37.342	18.034	1.00	27.15	O
ATOM	559	CB	GLU	A	74	75.378	37.804	15.195	1.00	30.01	C
ATOM	560	CG	GLU	A	74	75.546	37.668	13.679	1.00	32.33	C
ATOM	561	CD	GLU	A	74	76.686	36.741	13.283	1.00	33.71	C
ATOM	562	OE1	GLU	A	74	77.836	36.984	13.704	1.00	36.00	O
ATOM	563	OE2	GLU	A	74	76.431	35.768	12.543	1.00	35.10	O
ATOM	564	N	GLY	A	75	74.021	36.251	18.066	1.00	26.36	N
ATOM	565	CA	GLY	A	75	73.872	36.427	19.504	1.00	25.20	C
ATOM	566	C	GLY	A	75	72.872	37.461	19.993	1.00	24.86	C
ATOM	567	O	GLY	A	75	72.677	37.607	21.200	1.00	24.26	O
ATOM	568	N	GLY	A	76	72.238	38.179	19.070	1.00	24.23	N
ATOM	569	CA	GLY	A	76	71.266	39.186	19.464	1.00	24.11	C
ATOM	570	C	GLY	A	76	69.848	38.706	19.237	1.00	23.43	C
ATOM	571	O	GLY	A	76	69.627	37.531	18.963	1.00	23.27	O
ATOM	572	N	ILE	A	77	68.876	39.604	19.346	1.00	23.31	N
ATOM	573	CA	ILE	A	77	67.494	39.205	19.127	1.00	22.63	C
ATOM	574	C	ILE	A	77	66.718	40.293	18.391	1.00	23.12	C
ATOM	575	O	ILE	A	77	66.984	41.487	18.563	1.00	22.23	O
ATOM	576	CB	ILE	A	77	66.797	38.873	20.470	1.00	22.89	C
ATOM	577	CG1	ILE	A	77	65.535	38.044	20.212	1.00	22.47	C
ATOM	578	CG2	ILE	A	77	66.465	40.163	21.230	1.00	22.43	C
ATOM	579	CD1	ILE	A	77	64.847	37.547	21.474	1.00	21.82	C
ATOM	580	N	SER	A	78	65.771	39.873	17.556	1.00	23.10	N
ATOM	581	CA	SER	A	78	64.942	40.813	16.809	1.00	23.37	C
ATOM	582	C	SER	A	78	63.526	40.796	17.362	1.00	23.52	C
ATOM	583	O	SER	A	78	63.044	39.762	17.820	1.00	24.10	O
ATOM	584	CB	SER	A	78	64.877	40.434	15.321	1.00	23.20	C
ATOM	585	OG	SER	A	78	66.125	40.583	14.671	1.00	24.07	O
ATOM	586	N	PHE	A	79	62.863	41.944	17.328	1.00	23.99	N
ATOM	587	CA	PHE	A	79	61.483	42.020	17.777	1.00	24.76	C
ATOM	588	C	PHE	A	79	60.617	42.208	16.534	1.00	24.96	C
ATOM	589	O	PHE	A	79	60.474	43.321	16.031	1.00	24.87	O
ATOM	590	CB	PHE	A	79	61.284	43.183	18.760	1.00	24.45	C
ATOM	591	CG	PHE	A	79	61.820	42.905	20.137	1.00	24.94	C
ATOM	592	CD1	PHE	A	79	63.161	43.126	20.438	1.00	25.40	C
ATOM	593	CD2	PHE	A	79	60.993	42.367	21.121	1.00	25.21	C
ATOM	594	CE1	PHE	A	79	63.674	42.812	21.699	1.00	25.47	C
ATOM	595	CE2	PHE	A	79	61.496	42.050	22.382	1.00	25.32	C
ATOM	596	CZ	PHE	A	79	62.839	42.272	22.670	1.00	24.97	C
ATOM	597	N	ILE	A	80	60.060	41.108	16.033	1.00	25.49	N
ATOM	598	CA	ILE	A	80	59.212	41.134	14.837	1.00	25.86	C
ATOM	599	C	ILE	A	80	58.160	42.236	14.964	1.00	25.66	C
ATOM	600	O	ILE	A	80	57.435	42.294	15.961	1.00	24.99	O
ATOM	601	CB	ILE	A	80	58.496	39.775	14.634	1.00	26.44	C
ATOM	602	CG1	ILE	A	80	59.527	38.640	14.575	1.00	26.91	C
ATOM	603	CG2	ILE	A	80	57.658	39.810	13.353	1.00	26.85	C
ATOM	604	CD1	ILE	A	80	60.497	38.729	13.410	1.00	27.62	C
ATOM	605	N	PHE	A	81	58.064	43.101	13.955	1.00	25.74	N
ATOM	606	CA	PHE	A	81	57.107	44.202	14.020	1.00	26.34	C
ATOM	607	C	PHE	A	81	55.665	43.759	14.221	1.00	26.79	C
ATOM	608	O	PHE	A	81	55.234	42.737	13.688	1.00	26.54	O

TABLE 3

ATOM	609	CB	PHE	A	81	57.221	45.123	12.787	1.00	27.27	C
ATOM	610	CG	PHE	A	81	56.931	44.453	11.470	1.00	27.76	C
ATOM	611	CD1	PHE	A	81	57.864	43.610	10.877	1.00	27.97	C
ATOM	612	CD2	PHE	A	81	55.733	44.706	10.801	1.00	28.39	C
ATOM	613	CE1	PHE	A	81	57.614	43.027	9.631	1.00	28.62	C
ATOM	614	CE2	PHE	A	81	55.471	44.129	9.553	1.00	28.30	C
ATOM	615	CZ	PHE	A	81	56.414	43.290	8.969	1.00	28.84	C
ATOM	616	N	GLY	A	82	54.930	44.540	15.009	1.00	27.50	N
ATOM	617	CA	GLY	A	82	53.543	44.230	15.303	1.00	28.54	C
ATOM	618	C	GLY	A	82	52.553	45.047	14.496	1.00	29.14	C
ATOM	619	O	GLY	A	82	51.342	44.898	14.661	1.00	28.33	O
ATOM	620	N	SER	A	83	53.068	45.914	13.629	1.00	29.58	N
ATOM	621	CA	SER	A	83	52.222	46.746	12.780	1.00	30.10	C
ATOM	622	C	SER	A	83	51.858	45.966	11.515	1.00	30.82	C
ATOM	623	O	SER	A	83	52.172	46.368	10.393	1.00	30.41	O
ATOM	624	CB	SER	A	83	52.947	48.046	12.423	1.00	29.96	C
ATOM	625	OG	SER	A	83	54.228	47.778	11.889	1.00	29.80	O
ATOM	626	N	GLN	A	84	51.202	44.832	11.732	1.00	31.40	N
ATOM	627	CA	GLN	A	84	50.752	43.941	10.674	1.00	31.71	C
ATOM	628	C	GLN	A	84	49.694	43.059	11.328	1.00	32.16	C
ATOM	629	O	GLN	A	84	49.489	43.140	12.543	1.00	32.26	O
ATOM	630	CB	GLN	A	84	51.915	43.093	10.147	1.00	31.73	C
ATOM	631	CG	GLN	A	84	52.525	42.130	11.165	1.00	31.03	C
ATOM	632	CD	GLN	A	84	53.658	41.307	10.579	1.00	31.51	C
ATOM	633	OE1	GLN	A	84	53.500	40.679	9.532	1.00	31.44	O
ATOM	634	NE2	GLN	A	84	54.809	41.299	11.255	1.00	30.10	N
ATOM	635	N	SER	A	85	49.021	42.221	10.547	1.00	32.25	N
ATOM	636	CA	SER	A	85	47.986	41.365	11.115	1.00	32.76	C
ATOM	637	C	SER	A	85	48.568	40.370	12.113	1.00	33.10	C
ATOM	638	O	SER	A	85	49.736	39.988	12.020	1.00	33.02	O
ATOM	639	CB	SER	A	85	47.243	40.604	10.010	1.00	32.36	C
ATOM	640	OG	SER	A	85	48.034	39.553	9.489	1.00	32.58	O
ATOM	641	N	ILE	A	86	47.741	39.965	13.072	1.00	33.27	N
ATOM	642	CA	ILE	A	86	48.138	39.005	14.092	1.00	33.73	C
ATOM	643	C	ILE	A	86	48.637	37.732	13.412	1.00	34.65	C
ATOM	644	O	ILE	A	86	49.670	37.167	13.785	1.00	34.09	O
ATOM	645	CB	ILE	A	86	46.935	38.662	15.008	1.00	33.67	C
ATOM	646	CG1	ILE	A	86	46.553	39.889	15.842	1.00	33.78	C
ATOM	647	CG2	ILE	A	86	47.267	37.479	15.898	1.00	33.45	C
ATOM	648	CD1	ILE	A	86	45.321	39.696	16.704	1.00	34.30	C
ATOM	649	N	GLU	A	87	47.896	37.297	12.397	1.00	34.81	N
ATOM	650	CA	GLU	A	87	48.235	36.093	11.650	1.00	35.57	C
ATOM	651	C	GLU	A	87	49.582	36.220	10.946	1.00	34.64	C
ATOM	652	O	GLU	A	87	50.399	35.301	10.975	1.00	34.19	O
ATOM	653	CB	GLU	A	87	47.143	35.800	10.617	1.00	37.45	C
ATOM	654	CG	GLU	A	87	45.768	35.485	11.210	1.00	40.12	C
ATOM	655	CD	GLU	A	87	45.205	36.609	12.076	1.00	42.17	C
ATOM	656	OE1	GLU	A	87	45.205	37.779	11.629	1.00	42.59	O
ATOM	657	OE2	GLU	A	87	44.751	36.316	13.206	1.00	43.96	O
ATOM	658	N	SER	A	88	49.806	37.365	10.313	1.00	34.00	N
ATOM	659	CA	SER	A	88	51.045	37.619	9.592	1.00	34.14	C
ATOM	660	C	SER	A	88	52.264	37.630	10.523	1.00	33.33	C
ATOM	661	O	SER	A	88	53.291	37.015	10.225	1.00	33.84	O
ATOM	662	CB	SER	A	88	50.941	38.955	8.850	1.00	34.56	C
ATOM	663	OG	SER	A	88	52.106	39.207	8.086	1.00	37.63	O
ATOM	664	N	GLN	A	89	52.148	38.329	11.647	1.00	32.36	N
ATOM	665	CA	GLN	A	89	53.247	38.416	12.609	1.00	31.38	C



TABLE 3

ATOM	666	C	GLN	A	89	53.538	37.064	13.255	1.00	31.34	C
ATOM	667	O	GLN	A	89	54.697	36.688	13.433	1.00	30.83	O
ATOM	668	CB	GLN	A	89	52.923	39.448	13.696	1.00	30.40	C
ATOM	669	CG	GLN	A	89	53.986	39.546	14.786	1.00	29.25	C
ATOM	670	CD	GLN	A	89	53.629	40.544	15.877	1.00	28.00	C
ATOM	671	OE1	GLN	A	89	52.470	40.658	16.275	1.00	26.78	O
ATOM	672	NE2	GLN	A	89	54.632	41.258	16.378	1.00	26.79	N
ATOM	673	N	ALA	A	90	52.486	36.333	13.608	1.00	31.60	N
ATOM	674	CA	ALA	A	90	52.654	35.022	14.225	1.00	31.80	C
ATOM	675	C	ALA	A	90	53.379	34.079	13.265	1.00	32.05	C
ATOM	676	O	ALA	A	90	54.178	33.245	13.686	1.00	32.08	O
ATOM	677	CB	ALA	A	90	51.297	34.447	14.613	1.00	31.91	C
ATOM	678	N	ALA	A	91	53.105	34.224	11.971	1.00	32.10	N
ATOM	679	CA	ALA	A	91	53.738	33.386	10.958	1.00	32.03	C
ATOM	680	C	ALA	A	91	55.248	33.614	10.934	1.00	32.05	C
ATOM	681	O	ALA	A	91	56.026	32.666	10.818	1.00	31.83	O
ATOM	682	CB	ALA	A	91	53.137	33.678	9.578	1.00	32.23	C
ATOM	683	N	MET	A	92	55.664	34.873	11.038	1.00	31.86	N
ATOM	684	CA	MET	A	92	57.090	35.190	11.037	1.00	31.76	C
ATOM	685	C	MET	A	92	57.762	34.598	12.270	1.00	31.37	C
ATOM	686	O	MET	A	92	58.860	34.053	12.185	1.00	31.68	O
ATOM	687	CB	MET	A	92	57.311	36.702	11.024	1.00	31.76	C
ATOM	688	CG	MET	A	92	56.857	37.392	9.759	1.00	32.23	C
ATOM	689	SD	MET	A	92	57.284	39.134	9.784	1.00	32.24	S
ATOM	690	CE	MET	A	92	56.701	39.656	8.159	1.00	32.37	C
ATOM	691	N	VAL	A	93	57.100	34.718	13.418	1.00	31.37	N
ATOM	692	CA	VAL	A	93	57.639	34.185	14.667	1.00	30.84	C
ATOM	693	C	VAL	A	93	57.828	32.678	14.526	1.00	31.49	C
ATOM	694	O	VAL	A	93	58.901	32.142	14.805	1.00	31.13	O
ATOM	695	CB	VAL	A	93	56.686	34.472	15.849	1.00	30.30	C
ATOM	696	CG1	VAL	A	93	57.131	33.699	17.086	1.00	29.35	C
ATOM	697	CG2	VAL	A	93	56.662	35.971	16.138	1.00	29.04	C
ATOM	698	N	HIS	A	94	56.775	32.003	14.076	1.00	32.42	N
ATOM	699	CA	HIS	A	94	56.812	30.557	13.884	1.00	33.18	C
ATOM	700	C	HIS	A	94	57.929	30.173	12.909	1.00	32.93	C
ATOM	701	O	HIS	A	94	58.667	29.217	13.147	1.00	33.48	O
ATOM	702	CB	HIS	A	94	55.447	30.078	13.369	1.00	34.65	C
ATOM	703	CG	HIS	A	94	55.280	28.591	13.374	1.00	35.98	C
ATOM	704	ND1	HIS	A	94	55.796	27.778	12.388	1.00	36.93	N
ATOM	705	CD2	HIS	A	94	54.656	27.768	14.251	1.00	36.50	C
ATOM	706	CE1	HIS	A	94	55.497	26.519	12.657	1.00	36.90	C
ATOM	707	NE2	HIS	A	94	54.806	26.486	13.782	1.00	37.15	N
ATOM	708	N	ALA	A	95	58.067	30.928	11.823	1.00	32.80	N
ATOM	709	CA	ALA	A	95	59.109	30.649	10.834	1.00	32.63	C
ATOM	710	C	ALA	A	95	60.507	30.700	11.453	1.00	32.64	C
ATOM	711	O	ALA	A	95	61.383	29.903	11.107	1.00	32.76	O
ATOM	712	CB	ALA	A	95	59.019	31.641	9.677	1.00	32.50	C
ATOM	713	N	VAL	A	96	60.721	31.642	12.365	1.00	32.04	N
ATOM	714	CA	VAL	A	96	62.023	31.770	13.011	1.00	31.47	C
ATOM	715	C	VAL	A	96	62.262	30.620	13.981	1.00	31.55	C
ATOM	716	O	VAL	A	96	63.329	30.007	13.976	1.00	31.64	O
ATOM	717	CB	VAL	A	96	62.142	33.105	13.783	1.00	30.96	C
ATOM	718	CG1	VAL	A	96	63.479	33.176	14.508	1.00	30.67	C
ATOM	719	CG2	VAL	A	96	62.009	34.266	12.824	1.00	31.22	C
ATOM	720	N	LYS	A	97	61.261	30.327	14.805	1.00	32.04	N
ATOM	721	CA	LYS	A	97	61.358	29.256	15.792	1.00	33.20	C
ATOM	722	C	LYS	A	97	61.543	27.872	15.169	1.00	34.86	C

TABLE 3

ATOM	723	O	LYS	A	97	62.171	26.999	15.767	1.00	34.76	O
ATOM	724	CB	LYS	A	97	60.108	29.240	16.681	1.00	32.12	C
ATOM	725	CG	LYS	A	97	59.868	30.523	17.477	1.00	31.22	C
ATOM	726	CD	LYS	A	97	61.064	30.874	18.360	1.00	29.75	C
ATOM	727	CE	LYS	A	97	61.404	29.751	19.333	1.00	29.19	C
ATOM	728	NZ	LYS	A	97	62.616	30.076	20.141	1.00	29.12	N
ATOM	729	N	ASN	A	98	61.000	27.671	13.972	1.00	36.75	N
ATOM	730	CA	ASN	A	98	61.108	26.375	13.308	1.00	39.34	C
ATOM	731	C	ASN	A	98	61.978	26.386	12.055	1.00	40.41	C
ATOM	732	O	ASN	A	98	61.781	25.571	11.150	1.00	40.41	O
ATOM	733	CB	ASN	A	98	59.711	25.850	12.955	1.00	40.86	C
ATOM	734	CG	ASN	A	98	58.870	25.553	14.185	1.00	42.24	C
ATOM	735	OD1	ASN	A	98	58.468	26.461	14.912	1.00	44.16	O
ATOM	736	ND2	ASN	A	98	58.605	24.275	14.427	1.00	43.29	N
ATOM	737	N	PHE	A	99	62.950	27.293	12.010	1.00	41.32	N
ATOM	738	CA	PHE	A	99	63.837	27.410	10.854	1.00	42.37	C
ATOM	739	C	PHE	A	99	64.779	26.225	10.654	1.00	43.23	C
ATOM	740	O	PHE	A	99	65.086	25.860	9.519	1.00	43.09	O
ATOM	741	CB	PHE	A	99	64.680	28.682	10.957	1.00	42.31	C
ATOM	742	CG	PHE	A	99	65.533	28.941	9.746	1.00	42.53	C
ATOM	743	CD1	PHE	A	99	64.955	29.335	8.544	1.00	42.50	C
ATOM	744	CD2	PHE	A	99	66.913	28.780	9.803	1.00	42.81	C
ATOM	745	CE1	PHE	A	99	65.742	29.566	7.414	1.00	42.79	C
ATOM	746	CE2	PHE	A	99	67.707	29.009	8.681	1.00	42.73	C
ATOM	747	CZ	PHE	A	99	67.120	29.403	7.485	1.00	42.71	C
ATOM	748	N	LYS	A	100	65.246	25.639	11.752	1.00	44.14	N
ATOM	749	CA	LYS	A	100	66.173	24.512	11.678	1.00	45.76	C
ATOM	750	C	LYS	A	100	65.520	23.178	11.337	1.00	47.12	C
ATOM	751	O	LYS	A	100	66.214	22.185	11.130	1.00	47.59	O
ATOM	752	CB	LYS	A	100	66.941	24.372	12.996	1.00	45.30	C
ATOM	753	CG	LYS	A	100	67.867	25.541	13.304	1.00	44.67	C
ATOM	754	CD	LYS	A	100	68.619	25.319	14.604	1.00	44.01	C
ATOM	755	CE	LYS	A	100	69.645	26.417	14.840	1.00	43.17	C
ATOM	756	NZ	LYS	A	100	70.359	26.229	16.128	1.00	42.38	N
ATOM	757	N	ALA	A	101	64.193	23.152	11.279	1.00	48.59	N
ATOM	758	CA	ALA	A	101	63.472	21.924	10.960	1.00	50.30	C
ATOM	759	C	ALA	A	101	63.843	21.416	9.570	1.00	51.59	C
ATOM	760	O	ALA	A	101	64.125	22.202	8.666	1.00	51.58	O
ATOM	761	CB	ALA	A	101	61.967	22.162	11.043	1.00	49.96	C
ATOM	762	N	GLY	A	102	63.846	20.095	9.410	1.00	53.11	N
ATOM	763	CA	GLY	A	102	64.175	19.504	8.126	1.00	54.99	C
ATOM	764	C	GLY	A	102	62.909	19.190	7.356	1.00	56.36	C
ATOM	765	O	GLY	A	102	62.401	20.035	6.617	1.00	56.47	O
ATOM	766	N	PHE	A	103	62.396	17.975	7.524	1.00	57.72	N
ATOM	767	CA	PHE	A	103	61.167	17.580	6.848	1.00	59.15	C
ATOM	768	C	PHE	A	103	59.987	18.171	7.609	1.00	59.91	C
ATOM	769	O	PHE	A	103	59.771	17.853	8.779	1.00	60.20	O
ATOM	770	CB	PHE	A	103	61.036	16.054	6.797	1.00	59.55	C
ATOM	771	CG	PHE	A	103	62.114	15.377	5.996	1.00	59.88	C
ATOM	772	CD1	PHE	A	103	63.409	15.269	6.495	1.00	60.13	C
ATOM	773	CD2	PHE	A	103	61.835	14.854	4.739	1.00	59.99	C
ATOM	774	CE1	PHE	A	103	64.411	14.649	5.753	1.00	60.20	C
ATOM	775	CE2	PHE	A	103	62.830	14.232	3.988	1.00	60.34	C
ATOM	776	CZ	PHE	A	103	64.122	14.130	4.497	1.00	60.26	C
ATOM	777	N	VAL	A	104	59.229	19.035	6.942	1.00	60.70	N
ATOM	778	CA	VAL	A	104	58.078	19.673	7.566	1.00	61.34	C
ATOM	779	C	VAL	A	104	56.764	19.239	6.924	1.00	61.90	C

TABLE 3

ATOM	780	O	VAL	A	104	56.666	19.111	5.702	1.00	61.92	O
ATOM	781	CB	VAL	A	104	58.185	21.212	7.479	1.00	61.42	C
ATOM	782	CG1	VAL	A	104	56.991	21.858	8.169	1.00	61.56	C
ATOM	783	CG2	VAL	A	104	59.485	21.679	8.118	1.00	61.49	C
ATOM	784	N	VAL	A	105	55.757	19.014	7.761	1.00	62.35	N
ATOM	785	CA	VAL	A	105	54.440	18.604	7.292	1.00	62.87	C
ATOM	786	C	VAL	A	105	53.715	19.808	6.697	1.00	63.08	C
ATOM	787	O	VAL	A	105	53.411	20.771	7.403	1.00	63.17	O
ATOM	788	CB	VAL	A	105	53.591	18.034	8.450	1.00	62.93	C
ATOM	789	CG1	VAL	A	105	52.234	17.585	7.931	1.00	63.00	C
ATOM	790	CG2	VAL	A	105	54.324	16.876	9.109	1.00	62.99	C
ATOM	791	N	SER	A	106	53.445	19.751	5.397	1.00	63.19	N
ATOM	792	CA	SER	A	106	52.759	20.839	4.710	1.00	63.34	C
ATOM	793	C	SER	A	106	51.372	21.071	5.298	1.00	63.37	C
ATOM	794	O	SER	A	106	51.163	22.011	6.065	1.00	63.55	O
ATOM	795	CB	SER	A	106	52.638	20.527	3.217	1.00	63.52	C
ATOM	796	OG	SER	A	106	51.969	21.570	2.530	1.00	63.46	O
ATOM	797	N	HIS	A	222	78.549	29.753	16.811	1.00	46.50	N
ATOM	798	CA	HIS	A	222	79.214	29.762	18.111	1.00	46.34	C
ATOM	799	C	HIS	A	222	78.515	30.714	19.076	1.00	45.23	C
ATOM	800	O	HIS	A	222	78.376	30.423	20.263	1.00	45.39	O
ATOM	801	CB	HIS	A	222	80.679	30.185	17.962	1.00	47.77	C
ATOM	802	CG	HIS	A	222	81.512	29.225	17.170	1.00	49.66	C
ATOM	803	ND1	HIS	A	222	81.651	27.897	17.515	1.00	50.29	N
ATOM	804	CD2	HIS	A	222	82.269	29.406	16.061	1.00	50.09	C
ATOM	805	CE1	HIS	A	222	82.457	27.302	16.653	1.00	50.69	C
ATOM	806	NE2	HIS	A	222	82.847	28.195	15.761	1.00	50.78	N
ATOM	807	N	ASN	A	223	78.079	31.857	18.560	1.00	43.45	N
ATOM	808	CA	ASN	A	223	77.402	32.843	19.386	1.00	41.69	C
ATOM	809	C	ASN	A	223	75.906	32.910	19.120	1.00	39.79	C
ATOM	810	O	ASN	A	223	75.266	33.908	19.444	1.00	38.70	O
ATOM	811	CB	ASN	A	223	78.024	34.225	19.171	1.00	43.26	C
ATOM	812	CG	ASN	A	223	79.314	34.408	19.946	1.00	44.91	C
ATOM	813	OD1	ASN	A	223	79.305	34.509	21.177	1.00	45.63	O
ATOM	814	ND2	ASN	A	223	80.433	34.446	19.232	1.00	45.69	N
ATOM	815	N	GLU	A	224	75.345	31.852	18.537	1.00	37.33	N
ATOM	816	CA	GLU	A	224	73.915	31.836	18.254	1.00	35.82	C
ATOM	817	C	GLU	A	224	73.110	31.935	19.540	1.00	33.98	C
ATOM	818	O	GLU	A	224	73.464	31.338	20.555	1.00	34.05	O
ATOM	819	CB	GLU	A	224	73.508	30.560	17.499	1.00	36.85	C
ATOM	820	CG	GLU	A	224	73.919	29.250	18.173	1.00	38.61	C
ATOM	821	CD	GLU	A	224	73.188	28.035	17.613	1.00	39.59	C
ATOM	822	OE1	GLU	A	224	72.843	28.032	16.411	1.00	40.09	O
ATOM	823	OE2	GLU	A	224	72.967	27.072	18.377	1.00	40.45	O
ATOM	824	N	LEU	A	225	72.032	32.707	19.496	1.00	32.23	N
ATOM	825	CA	LEU	A	225	71.162	32.869	20.651	1.00	31.01	C
ATOM	826	C	LEU	A	225	69.988	31.928	20.443	1.00	30.52	C
ATOM	827	O	LEU	A	225	69.142	32.164	19.578	1.00	29.48	O
ATOM	828	CB	LEU	A	225	70.660	34.311	20.750	1.00	30.04	C
ATOM	829	CG	LEU	A	225	69.753	34.608	21.947	1.00	29.97	C
ATOM	830	CD1	LEU	A	225	70.505	34.321	23.250	1.00	29.58	C
ATOM	831	CD2	LEU	A	225	69.294	36.056	21.899	1.00	28.91	C
ATOM	832	N	VAL	A	226	69.938	30.863	21.238	1.00	30.37	N
ATOM	833	CA	VAL	A	226	68.874	29.875	21.107	1.00	30.90	C
ATOM	834	C	VAL	A	226	68.249	29.459	22.436	1.00	31.48	C
ATOM	835	O	VAL	A	226	68.767	29.782	23.512	1.00	31.51	O
ATOM	836	CB	VAL	A	226	69.405	28.604	20.414	1.00	30.86	C

TABLE 3

ATOM	837	CG1	VAL	A	226	69.837	28.924	18.997	1.00	30.18	C
ATOM	838	CG2	VAL	A	226	70.579	28.040	21.209	1.00	31.20	C
ATOM	839	N	ASP	A	227	67.130	28.743	22.352	1.00	31.82	N
ATOM	840	CA	ASP	A	227	66.446	28.257	23.543	1.00	32.90	C
ATOM	841	C	ASP	A	227	66.961	26.857	23.874	1.00	34.23	C
ATOM	842	O	ASP	A	227	67.891	26.365	23.231	1.00	34.23	O
ATOM	843	CB	ASP	A	227	64.921	28.225	23.339	1.00	32.40	C
ATOM	844	CG	ASP	A	227	64.486	27.355	22.158	1.00	32.01	C
ATOM	845	OD1	ASP	A	227	65.177	26.369	21.829	1.00	31.77	O
ATOM	846	OD2	ASP	A	227	63.426	27.652	21.569	1.00	31.75	O
ATOM	847	N	SER	A	228	66.354	26.219	24.871	1.00	35.88	N
ATOM	848	CA	SER	A	228	66.767	24.881	25.289	1.00	37.61	C
ATOM	849	C	SER	A	228	66.675	23.846	24.169	1.00	38.35	C
ATOM	850	O	SER	A	228	67.330	22.805	24.227	1.00	38.93	O
ATOM	851	CB	SER	A	228	65.927	24.421	26.486	1.00	37.87	C
ATOM	852	OG	SER	A	228	64.547	24.377	26.159	1.00	39.04	O
ATOM	853	N	GLN	A	229	65.868	24.135	23.152	1.00	39.18	N
ATOM	854	CA	GLN	A	229	65.698	23.227	22.021	1.00	39.80	C
ATOM	855	C	GLN	A	229	66.566	23.622	20.828	1.00	39.23	C
ATOM	856	O	GLN	A	229	66.348	23.151	19.712	1.00	39.37	O
ATOM	857	CB	GLN	A	229	64.232	23.192	21.584	1.00	41.24	C
ATOM	858	CG	GLN	A	229	63.250	22.883	22.703	1.00	43.62	C
ATOM	859	CD	GLN	A	229	61.819	22.778	22.207	1.00	45.00	C
ATOM	860	OE1	GLN	A	229	60.871	22.836	22.992	1.00	45.95	O
ATOM	861	NE2	GLN	A	229	61.656	22.613	20.898	1.00	46.15	N
ATOM	862	N	LYS	A	230	67.544	24.492	21.065	1.00	38.50	N
ATOM	863	CA	LYS	A	230	68.451	24.949	20.013	1.00	37.74	C
ATOM	864	C	LYS	A	230	67.765	25.765	18.920	1.00	36.23	C
ATOM	865	O	LYS	A	230	68.303	25.921	17.824	1.00	36.06	O
ATOM	866	CB	LYS	A	230	69.176	23.756	19.376	1.00	39.35	C
ATOM	867	CG	LYS	A	230	70.046	22.964	20.342	1.00	41.26	C
ATOM	868	CD	LYS	A	230	71.113	23.843	20.984	1.00	43.12	C
ATOM	869	CE	LYS	A	230	71.938	23.060	21.997	1.00	44.34	C
ATOM	870	NZ	LYS	A	230	72.907	23.933	22.723	1.00	45.01	N
ATOM	871	N	ARG	A	231	66.579	26.283	19.217	1.00	34.84	N
ATOM	872	CA	ARG	A	231	65.844	27.099	18.257	1.00	34.03	C
ATOM	873	C	ARG	A	231	66.203	28.565	18.499	1.00	32.95	C
ATOM	874	O	ARG	A	231	66.289	29.001	19.646	1.00	31.96	O
ATOM	875	CB	ARG	A	231	64.335	26.910	18.442	1.00	34.65	C
ATOM	876	CG	ARG	A	231	63.864	25.460	18.369	1.00	35.93	C
ATOM	877	CD	ARG	A	231	62.362	25.367	18.593	1.00	36.99	C
ATOM	878	NE	ARG	A	231	61.977	25.904	19.897	1.00	38.07	N
ATOM	879	CZ	ARG	A	231	60.720	26.085	20.292	1.00	39.08	C
ATOM	880	NH1	ARG	A	231	59.716	25.774	19.484	1.00	39.24	N
ATOM	881	NH2	ARG	A	231	60.467	26.582	21.498	1.00	40.03	N
ATOM	882	N	TYR	A	232	66.414	29.320	17.424	1.00	31.73	N
ATOM	883	CA	TYR	A	232	66.754	30.733	17.548	1.00	30.36	C
ATOM	884	C	TYR	A	232	65.701	31.473	18.364	1.00	29.68	C
ATOM	885	O	TYR	A	232	64.504	31.206	18.237	1.00	28.90	O
ATOM	886	CB	TYR	A	232	66.843	31.393	16.172	1.00	31.11	C
ATOM	887	CG	TYR	A	232	67.909	30.824	15.268	1.00	31.38	C
ATOM	888	CD1	TYR	A	232	69.246	30.798	15.661	1.00	31.61	C
ATOM	889	CD2	TYR	A	232	67.582	30.320	14.013	1.00	31.87	C
ATOM	890	CE1	TYR	A	232	70.233	30.279	14.820	1.00	32.53	C
ATOM	891	CE2	TYR	A	232	68.557	29.801	13.167	1.00	32.60	C
ATOM	892	CZ	TYR	A	232	69.877	29.784	13.576	1.00	32.81	C
ATOM	893	OH	TYR	A	232	70.838	29.280	12.730	1.00	34.16	O

TABLE 3

ATOM	894	N	LEU A 233	66.148	32.401	19.205	1.00	28.53	N
ATOM	895	CA	LEU A 233	65.218	33.185	20.003	1.00	28.15	C
ATOM	896	C	LEU A 233	64.666	34.306	19.136	1.00	27.30	C
ATOM	897	O	LEU A 233	65.333	34.783	18.216	1.00	27.41	O
ATOM	898	CB	LEU A 233	65.913	33.801	21.224	1.00	28.49	C
ATOM	899	CG	LEU A 233	66.443	32.883	22.328	1.00	29.33	C
ATOM	900	CD1	LEU A 233	66.808	33.738	23.535	1.00	29.80	C
ATOM	901	CD2	LEU A 233	65.396	31.855	22.724	1.00	28.86	C
ATOM	902	N	VAL A 234	63.444	34.725	19.431	1.00	26.70	N
ATOM	903	CA	VAL A 234	62.830	35.804	18.684	1.00	26.26	C
ATOM	904	C	VAL A 234	61.821	36.512	19.564	1.00	25.94	C
ATOM	905	O	VAL A 234	61.172	35.892	20.407	1.00	26.26	O
ATOM	906	CB	VAL A 234	62.120	35.288	17.407	1.00	26.74	C
ATOM	907	CG1	VAL A 234	60.919	34.429	17.782	1.00	25.97	C
ATOM	908	CG2	VAL A 234	61.693	36.466	16.543	1.00	25.98	C
ATOM	909	N	GLY A 235	61.711	37.821	19.378	1.00	25.83	N
ATOM	910	CA	GLY A 235	60.766	38.599	20.152	1.00	25.73	C
ATOM	911	C	GLY A 235	59.698	39.117	19.215	1.00	25.81	C
ATOM	912	O	GLY A 235	59.823	38.976	17.999	1.00	26.03	O
ATOM	913	N	ALA A 236	58.655	39.724	19.771	1.00	25.58	N
ATOM	914	CA	ALA A 236	57.567	40.255	18.962	1.00	24.80	C
ATOM	915	C	ALA A 236	56.956	41.480	19.628	1.00	24.47	C
ATOM	916	O	ALA A 236	56.724	41.494	20.838	1.00	23.49	O
ATOM	917	CB	ALA A 236	56.500	39.183	18.759	1.00	24.63	C
ATOM	918	N	GLY A 237	56.694	42.509	18.832	1.00	23.78	N
ATOM	919	CA	GLY A 237	56.104	43.711	19.381	1.00	23.62	C
ATOM	920	C	GLY A 237	54.597	43.582	19.482	1.00	24.13	C
ATOM	921	O	GLY A 237	53.968	42.900	18.671	1.00	23.90	O
ATOM	922	N	ILE A 238	54.015	44.210	20.497	1.00	24.19	N
ATOM	923	CA	ILE A 238	52.570	44.188	20.654	1.00	24.84	C
ATOM	924	C	ILE A 238	52.113	45.610	20.932	1.00	25.64	C
ATOM	925	O	ILE A 238	52.931	46.496	21.196	1.00	24.88	O
ATOM	926	CB	ILE A 238	52.110	43.274	21.816	1.00	24.90	C
ATOM	927	CG1	ILE A 238	52.669	43.782	23.147	1.00	24.94	C
ATOM	928	CG2	ILE A 238	52.537	41.841	21.550	1.00	24.38	C
ATOM	929	CD1	ILE A 238	52.192	42.969	24.360	1.00	25.52	C
ATOM	930	N	ASN A 239	50.807	45.831	20.854	1.00	26.34	N
ATOM	931	CA	ASN A 239	50.251	47.147	21.116	1.00	27.12	C
ATOM	932	C	ASN A 239	49.239	47.032	22.248	1.00	27.64	C
ATOM	933	O	ASN A 239	48.820	45.932	22.610	1.00	27.63	O
ATOM	934	CB	ASN A 239	49.598	47.715	19.849	1.00	27.57	C
ATOM	935	CG	ASN A 239	48.478	46.841	19.325	1.00	27.88	C
ATOM	936	OD1	ASN A 239	47.419	46.731	19.941	1.00	28.35	O
ATOM	937	ND2	ASN A 239	48.708	46.211	18.181	1.00	28.71	N
ATOM	938	N	THR A 240	48.858	48.172	22.808	1.00	28.33	N
ATOM	939	CA	THR A 240	47.916	48.210	23.916	1.00	29.57	C
ATOM	940	C	THR A 240	46.456	48.037	23.496	1.00	31.11	C
ATOM	941	O	THR A 240	45.553	48.160	24.324	1.00	31.21	O
ATOM	942	CB	THR A 240	48.056	49.538	24.686	1.00	29.04	C
ATOM	943	OG1	THR A 240	47.813	50.632	23.792	1.00	29.08	O
ATOM	944	CG2	THR A 240	49.468	49.678	25.262	1.00	27.94	C
ATOM	945	N	ARG A 241	46.217	47.736	22.223	1.00	32.81	N
ATOM	946	CA	ARG A 241	44.843	47.584	21.749	1.00	34.67	C
ATOM	947	C	ARG A 241	44.326	46.161	21.532	1.00	34.16	C
ATOM	948	O	ARG A 241	43.360	45.752	22.174	1.00	34.43	O
ATOM	949	CB	ARG A 241	44.635	48.395	20.464	1.00	36.65	C
ATOM	950	CG	ARG A 241	43.247	48.215	19.851	1.00	39.95	C

TABLE 3

ATOM	951	CD	ARG	A	241	42.994	49.151	18.671	1.00	42.38	C
ATOM	952	NE	ARG	A	241	42.483	50.457	19.088	1.00	45.23	N
ATOM	953	CZ	ARG	A	241	43.212	51.418	19.648	1.00	46.14	C
ATOM	954	NH1	ARG	A	241	44.509	51.238	19.870	1.00	47.33	N
ATOM	955	NH2	ARG	A	241	42.642	52.566	19.990	1.00	46.48	N
ATOM	956	N	ASP	A	242	44.955	45.408	20.636	1.00	33.84	N
ATOM	957	CA	ASP	A	242	44.493	44.050	20.349	1.00	33.74	C
ATOM	958	C	ASP	A	242	45.275	42.926	21.026	1.00	33.27	C
ATOM	959	O	ASP	A	242	45.270	41.796	20.547	1.00	33.34	O
ATOM	960	CB	ASP	A	242	44.483	43.803	18.830	1.00	33.77	C
ATOM	961	CG	ASP	A	242	45.874	43.869	18.206	1.00	33.91	C
ATOM	962	OD1	ASP	A	242	46.869	43.553	18.891	1.00	34.63	O
ATOM	963	OD2	ASP	A	242	45.975	44.220	17.012	1.00	34.44	O
ATOM	964	N	PHE	A	243	45.929	43.228	22.143	1.00	33.23	N
ATOM	965	CA	PHE	A	243	46.725	42.228	22.854	1.00	33.10	C
ATOM	966	C	PHE	A	243	45.977	40.971	23.305	1.00	33.10	C
ATOM	967	O	PHE	A	243	46.553	39.883	23.330	1.00	32.90	O
ATOM	968	CB	PHE	A	243	47.428	42.878	24.056	1.00	32.51	C
ATOM	969	CG	PHE	A	243	46.494	43.438	25.089	1.00	31.55	C
ATOM	970	CD1	PHE	A	243	45.956	42.620	26.078	1.00	31.75	C
ATOM	971	CD2	PHE	A	243	46.155	44.785	25.077	1.00	31.51	C
ATOM	972	CE1	PHE	A	243	45.095	43.136	27.041	1.00	31.53	C
ATOM	973	CE2	PHE	A	243	45.293	45.314	26.037	1.00	31.87	C
ATOM	974	CZ	PHE	A	243	44.763	44.487	27.022	1.00	32.20	C
ATOM	975	N	ARG	A	244	44.703	41.104	23.660	1.00	33.75	N
ATOM	976	CA	ARG	A	244	43.937	39.942	24.105	1.00	34.29	C
ATOM	977	C	ARG	A	244	43.920	38.850	23.042	1.00	34.39	C
ATOM	978	O	ARG	A	244	43.801	37.666	23.355	1.00	34.22	O
ATOM	979	CB	ARG	A	244	42.507	40.347	24.478	1.00	34.64	C
ATOM	980	CG	ARG	A	244	42.444	41.300	25.662	1.00	35.99	C
ATOM	981	CD	ARG	A	244	41.012	41.616	26.074	1.00	36.99	C
ATOM	982	NE	ARG	A	244	40.968	42.595	27.157	1.00	37.44	N
ATOM	983	CZ	ARG	A	244	41.260	43.884	27.012	1.00	38.60	C
ATOM	984	NH1	ARG	A	244	41.616	44.361	25.825	1.00	38.28	N
ATOM	985	NH2	ARG	A	244	41.200	44.699	28.058	1.00	39.02	N
ATOM	986	N	GLU	A	245	44.048	39.247	21.782	1.00	34.77	N
ATOM	987	CA	GLU	A	245	44.066	38.281	20.693	1.00	35.05	C
ATOM	988	C	GLU	A	245	45.473	38.075	20.138	1.00	34.00	C
ATOM	989	O	GLU	A	245	45.853	36.955	19.803	1.00	33.63	O
ATOM	990	CB	GLU	A	245	43.128	38.725	19.561	1.00	36.92	C
ATOM	991	CG	GLU	A	245	41.643	38.667	19.921	1.00	40.34	C
ATOM	992	CD	GLU	A	245	41.188	39.805	20.829	1.00	42.35	C
ATOM	993	OE1	GLU	A	245	40.089	39.688	21.415	1.00	44.16	O
ATOM	994	OE2	GLU	A	245	41.912	40.821	20.949	1.00	43.70	O
ATOM	995	N	ARG	A	246	46.249	39.151	20.051	1.00	32.70	N
ATOM	996	CA	ARG	A	246	47.605	39.060	19.512	1.00	31.63	C
ATOM	997	C	ARG	A	246	48.569	38.278	20.403	1.00	31.12	C
ATOM	998	O	ARG	A	246	49.349	37.467	19.908	1.00	30.59	O
ATOM	999	CB	ARG	A	246	48.167	40.464	19.251	1.00	31.59	C
ATOM	1000	CG	ARG	A	246	49.547	40.475	18.593	1.00	31.32	C
ATOM	1001	CD	ARG	A	246	50.027	41.901	18.325	1.00	31.90	C
ATOM	1002	NE	ARG	A	246	49.162	42.624	17.392	1.00	32.03	N
ATOM	1003	CZ	ARG	A	246	49.171	42.461	16.072	1.00	31.59	C
ATOM	1004	NH1	ARG	A	246	50.004	41.597	15.506	1.00	31.30	N
ATOM	1005	NH2	ARG	A	246	48.348	43.171	15.315	1.00	32.08	N
ATOM	1006	N	VAL	A	247	48.514	38.511	21.712	1.00	30.54	N
ATOM	1007	CA	VAL	A	247	49.411	37.822	22.638	1.00	30.81	C

TABLE 3

ATOM	1008	C	VAL	A	247	49.299	36.296	22.600	1.00	31.06	C
ATOM	1009	O	VAL	A	247	50.304	35.603	22.439	1.00	31.19	O
ATOM	1010	CB	VAL	A	247	49.215	38.339	24.087	1.00	30.61	C
ATOM	1011	CG1	VAL	A	247	49.955	37.460	25.070	1.00	29.27	C
ATOM	1012	CG2	VAL	A	247	49.742	39.772	24.189	1.00	30.03	C
ATOM	1013	N	PRO	A	248	48.080	35.749	22.754	1.00	31.23	N
ATOM	1014	CA	PRO	A	248	47.944	34.289	22.717	1.00	31.12	C
ATOM	1015	C	PRO	A	248	48.504	33.704	21.420	1.00	30.88	C
ATOM	1016	O	PRO	A	248	49.142	32.650	21.421	1.00	30.83	O
ATOM	1017	CB	PRO	A	248	46.434	34.084	22.846	1.00	31.29	C
ATOM	1018	CG	PRO	A	248	46.026	35.237	23.719	1.00	30.86	C
ATOM	1019	CD	PRO	A	248	46.802	36.388	23.118	1.00	30.24	C
ATOM	1020	N	ALA	A	249	48.272	34.402	20.313	1.00	31.01	N
ATOM	1021	CA	ALA	A	249	48.751	33.953	19.012	1.00	30.71	C
ATOM	1022	C	ALA	A	249	50.277	33.926	18.960	1.00	30.92	C
ATOM	1023	O	ALA	A	249	50.871	32.989	18.421	1.00	30.39	O
ATOM	1024	CB	ALA	A	249	48.211	34.859	17.919	1.00	31.05	C
ATOM	1025	N	LEU	A	250	50.909	34.957	19.516	1.00	30.74	N
ATOM	1026	CA	LEU	A	250	52.367	35.035	19.521	1.00	30.84	C
ATOM	1027	C	LEU	A	250	52.952	33.987	20.459	1.00	31.45	C
ATOM	1028	O	LEU	A	250	53.995	33.403	20.172	1.00	31.01	O
ATOM	1029	CB	LEU	A	250	52.827	36.437	19.935	1.00	30.44	C
ATOM	1030	CG	LEU	A	250	52.442	37.553	18.952	1.00	30.49	C
ATOM	1031	CD1	LEU	A	250	52.899	38.901	19.491	1.00	29.78	C
ATOM	1032	CD2	LEU	A	250	53.071	37.279	17.590	1.00	29.75	C
ATOM	1033	N	VAL	A	251	52.275	33.752	21.579	1.00	32.58	N
ATOM	1034	CA	VAL	A	251	52.724	32.755	22.546	1.00	33.79	C
ATOM	1035	C	VAL	A	251	52.683	31.378	21.884	1.00	34.44	C
ATOM	1036	O	VAL	A	251	53.632	30.598	21.987	1.00	34.16	O
ATOM	1037	CB	VAL	A	251	51.818	32.742	23.799	1.00	34.18	C
ATOM	1038	CG1	VAL	A	251	52.183	31.569	24.703	1.00	35.25	C
ATOM	1039	CG2	VAL	A	251	51.965	34.055	24.554	1.00	35.24	C
ATOM	1040	N	GLU	A	252	51.580	31.094	21.196	1.00	34.83	N
ATOM	1041	CA	GLU	A	252	51.411	29.818	20.509	1.00	35.52	C
ATOM	1042	C	GLU	A	252	52.488	29.645	19.442	1.00	34.61	C
ATOM	1043	O	GLU	A	252	53.032	28.557	19.277	1.00	34.77	O
ATOM	1044	CB	GLU	A	252	50.031	29.742	19.845	1.00	37.32	C
ATOM	1045	CG	GLU	A	252	49.752	28.398	19.162	1.00	40.99	C
ATOM	1046	CD	GLU	A	252	48.561	28.429	18.203	1.00	43.11	C
ATOM	1047	OE1	GLU	A	252	48.090	27.335	17.814	1.00	44.94	O
ATOM	1048	OE2	GLU	A	252	48.102	29.532	17.823	1.00	44.42	O
ATOM	1049	N	ALA	A	253	52.784	30.723	18.719	1.00	33.41	N
ATOM	1050	CA	ALA	A	253	53.793	30.691	17.663	1.00	32.41	C
ATOM	1051	C	ALA	A	253	55.198	30.428	18.201	1.00	31.93	C
ATOM	1052	O	ALA	A	253	56.104	30.078	17.441	1.00	31.99	O
ATOM	1053	CB	ALA	A	253	53.773	31.999	16.884	1.00	32.46	C
ATOM	1054	N	GLY	A	254	55.384	30.613	19.504	1.00	30.81	N
ATOM	1055	CA	GLY	A	254	56.684	30.366	20.098	1.00	29.67	C
ATOM	1056	C	GLY	A	254	57.527	31.587	20.431	1.00	28.80	C
ATOM	1057	O	GLY	A	254	58.723	31.452	20.686	1.00	28.19	O
ATOM	1058	N	ALA	A	255	56.929	32.775	20.429	1.00	28.28	N
ATOM	1059	CA	ALA	A	255	57.690	33.984	20.752	1.00	27.64	C
ATOM	1060	C	ALA	A	255	58.349	33.807	22.112	1.00	27.07	C
ATOM	1061	O	ALA	A	255	57.721	33.341	23.059	1.00	27.00	O
ATOM	1062	CB	ALA	A	255	56.776	35.203	20.769	1.00	27.72	C
ATOM	1063	N	ASP	A	256	59.617	34.183	22.205	1.00	26.96	N
ATOM	1064	CA	ASP	A	256	60.368	34.049	23.446	1.00	26.98	C

TABLE 3

ATOM	1065	C	ASP	A	256	60.197	35.244	24.380	1.00	26.65	C
ATOM	1066	O	ASP	A	256	60.354	35.124	25.594	1.00	26.61	O
ATOM	1067	CB	ASP	A	256	61.845	33.848	23.117	1.00	27.66	C
ATOM	1068	CG	ASP	A	256	62.085	32.590	22.312	1.00	28.65	C
ATOM	1069	OD1	ASP	A	256	62.063	31.497	22.908	1.00	29.35	O
ATOM	1070	OD2	ASP	A	256	62.275	32.690	21.081	1.00	29.48	O
ATOM	1071	N	VAL	A	257	59.873	36.397	23.808	1.00	25.89	N
ATOM	1072	CA	VAL	A	257	59.683	37.608	24.594	1.00	25.16	C
ATOM	1073	C	VAL	A	257	58.841	38.589	23.786	1.00	24.93	C
ATOM	1074	O	VAL	A	257	58.880	38.581	22.556	1.00	24.52	O
ATOM	1075	CB	VAL	A	257	61.053	38.255	24.950	1.00	25.36	C
ATOM	1076	CG1	VAL	A	257	61.850	38.514	23.684	1.00	26.06	C
ATOM	1077	CG2	VAL	A	257	60.847	39.550	25.725	1.00	24.98	C
ATOM	1078	N	LEU	A	258	58.072	39.415	24.487	1.00	24.27	N
ATOM	1079	CA	LEU	A	258	57.220	40.413	23.851	1.00	24.81	C
ATOM	1080	C	LEU	A	258	57.652	41.801	24.319	1.00	25.12	C
ATOM	1081	O	LEU	A	258	58.377	41.936	25.304	1.00	25.19	O
ATOM	1082	CB	LEU	A	258	55.758	40.200	24.253	1.00	24.78	C
ATOM	1083	CG	LEU	A	258	55.165	38.798	24.097	1.00	25.27	C
ATOM	1084	CD1	LEU	A	258	53.738	38.804	24.625	1.00	26.64	C
ATOM	1085	CD2	LEU	A	258	55.201	38.367	22.636	1.00	25.42	C
ATOM	1086	N	CYS	A	259	57.202	42.829	23.612	1.00	24.79	N
ATOM	1087	CA	CYS	A	259	57.518	44.195	23.999	1.00	25.27	C
ATOM	1088	C	CYS	A	259	56.447	45.139	23.486	1.00	25.48	C
ATOM	1089	O	CYS	A	259	56.146	45.150	22.297	1.00	25.28	O
ATOM	1090	CB	CYS	A	259	58.883	44.628	23.448	1.00	25.05	C
ATOM	1091	SG	CYS	A	259	59.397	46.260	24.055	1.00	24.98	S
ATOM	1092	N	ILE	A	260	55.864	45.920	24.389	1.00	26.39	N
ATOM	1093	CA	ILE	A	260	54.846	46.884	23.996	1.00	27.80	C
ATOM	1094	C	ILE	A	260	55.571	48.017	23.275	1.00	29.01	C
ATOM	1095	O	ILE	A	260	56.492	48.627	23.816	1.00	29.15	O
ATOM	1096	CB	ILE	A	260	54.108	47.462	25.210	1.00	27.85	C
ATOM	1097	CG1	ILE	A	260	53.585	46.325	26.088	1.00	27.74	C
ATOM	1098	CG2	ILE	A	260	52.943	48.340	24.734	1.00	27.65	C
ATOM	1099	CD1	ILE	A	260	52.992	46.796	27.406	1.00	29.12	C
ATOM	1100	N	ASP	A	261	55.136	48.287	22.054	1.00	30.05	N
ATOM	1101	CA	ASP	A	261	55.726	49.307	21.195	1.00	31.69	C
ATOM	1102	C	ASP	A	261	54.914	50.611	21.272	1.00	31.11	C
ATOM	1103	O	ASP	A	261	53.747	50.624	20.901	1.00	31.52	O
ATOM	1104	CB	ASP	A	261	55.760	48.721	19.773	1.00	33.20	C
ATOM	1105	CG	ASP	A	261	56.363	49.653	18.746	1.00	35.95	C
ATOM	1106	OD1	ASP	A	261	57.279	50.427	19.080	1.00	37.14	O
ATOM	1107	OD2	ASP	A	261	55.925	49.586	17.576	1.00	37.53	O
ATOM	1108	N	SER	A	262	55.524	51.692	21.769	1.00	30.51	N
ATOM	1109	CA	SER	A	262	54.829	52.985	21.896	1.00	30.28	C
ATOM	1110	C	SER	A	262	55.742	54.207	22.054	1.00	29.74	C
ATOM	1111	O	SER	A	262	56.801	54.123	22.673	1.00	29.61	O
ATOM	1112	CB	SER	A	262	53.863	52.937	23.087	1.00	31.07	C
ATOM	1113	OG	SER	A	262	53.352	54.226	23.389	1.00	31.39	O
ATOM	1114	N	SER	A	263	55.313	55.350	21.515	1.00	29.06	N
ATOM	1115	CA	SER	A	263	56.093	56.585	21.608	1.00	28.10	C
ATOM	1116	C	SER	A	263	56.027	57.203	23.005	1.00	27.79	C
ATOM	1117	O	SER	A	263	56.822	58.079	23.345	1.00	28.25	O
ATOM	1118	CB	SER	A	263	55.611	57.615	20.574	1.00	28.95	C
ATOM	1119	OG	SER	A	263	54.300	58.073	20.857	1.00	29.45	O
ATOM	1120	N	ASP	A	264	55.073	56.749	23.809	1.00	26.48	N
ATOM	1121	CA	ASP	A	264	54.923	57.245	25.173	1.00	25.78	C



TABLE 3

ATOM	1122	C	ASP	A	264	54.400	56.107	26.043	1.00	25.45	C
ATOM	1123	O	ASP	A	264	53.191	55.891	26.144	1.00	25.07	O
ATOM	1124	CB	ASP	A	264	53.959	58.440	25.202	1.00	25.30	C
ATOM	1125	CG	ASP	A	264	53.616	58.900	26.619	1.00	24.43	C
ATOM	1126	OD1	ASP	A	264	54.333	58.559	27.586	1.00	23.75	O
ATOM	1127	OD2	ASP	A	264	52.618	59.629	26.760	1.00	24.33	O
ATOM	1128	N	GLY	A	265	55.331	55.378	26.652	1.00	24.58	N
ATOM	1129	CA	GLY	A	265	54.985	54.253	27.500	1.00	24.14	C
ATOM	1130	C	GLY	A	265	54.505	54.603	28.896	1.00	24.38	C
ATOM	1131	O	GLY	A	265	54.105	53.718	29.655	1.00	23.84	O
ATOM	1132	N	PHE	A	266	54.554	55.884	29.250	1.00	24.38	N
ATOM	1133	CA	PHE	A	266	54.095	56.321	30.562	1.00	24.40	C
ATOM	1134	C	PHE	A	266	52.584	56.429	30.382	1.00	24.85	C
ATOM	1135	O	PHE	A	266	52.035	57.523	30.275	1.00	23.66	O
ATOM	1136	CB	PHE	A	266	54.700	57.685	30.902	1.00	24.77	C
ATOM	1137	CG	PHE	A	266	54.758	57.987	32.383	1.00	25.09	C
ATOM	1138	CD1	PHE	A	266	54.030	57.233	33.302	1.00	24.80	C
ATOM	1139	CD2	PHE	A	266	55.530	59.047	32.851	1.00	24.88	C
ATOM	1140	CE1	PHE	A	266	54.071	57.533	34.665	1.00	25.40	C
ATOM	1141	CE2	PHE	A	266	55.580	59.360	34.210	1.00	24.97	C
ATOM	1142	CZ	PHE	A	266	54.849	58.601	35.121	1.00	25.68	C
ATOM	1143	N	SER	A	267	51.924	55.274	30.348	1.00	25.48	N
ATOM	1144	CA	SER	A	267	50.486	55.203	30.112	1.00	26.23	C
ATOM	1145	C	SER	A	267	49.777	54.078	30.855	1.00	26.64	C
ATOM	1146	O	SER	A	267	50.306	52.971	30.983	1.00	25.99	O
ATOM	1147	CB	SER	A	267	50.241	55.016	28.616	1.00	26.26	C
ATOM	1148	OG	SER	A	267	48.898	54.647	28.356	1.00	28.51	O
ATOM	1149	N	GLU	A	268	48.567	54.363	31.321	1.00	27.32	N
ATOM	1150	CA	GLU	A	268	47.776	53.363	32.021	1.00	28.41	C
ATOM	1151	C	GLU	A	268	47.486	52.195	31.089	1.00	28.35	C
ATOM	1152	O	GLU	A	268	47.276	51.070	31.544	1.00	27.34	O
ATOM	1153	CB	GLU	A	268	46.454	53.964	32.513	1.00	30.40	C
ATOM	1154	CG	GLU	A	268	46.594	54.834	33.754	1.00	33.77	C
ATOM	1155	CD	GLU	A	268	45.255	55.298	34.320	1.00	35.87	C
ATOM	1156	OE1	GLU	A	268	45.246	55.792	35.471	1.00	37.72	O
ATOM	1157	OE2	GLU	A	268	44.221	55.177	33.623	1.00	35.03	O
ATOM	1158	N	TRP	A	269	47.471	52.464	29.785	1.00	28.35	N
ATOM	1159	CA	TRP	A	269	47.204	51.417	28.806	1.00	29.40	C
ATOM	1160	C	TRP	A	269	48.275	50.332	28.857	1.00	29.06	C
ATOM	1161	O	TRP	A	269	47.976	49.154	28.653	1.00	29.12	O
ATOM	1162	CB	TRP	A	269	47.121	51.995	27.388	1.00	30.30	C
ATOM	1163	CG	TRP	A	269	45.916	52.861	27.150	1.00	32.00	C
ATOM	1164	CD1	TRP	A	269	45.908	54.202	26.892	1.00	32.39	C
ATOM	1165	CD2	TRP	A	269	44.543	52.443	27.146	1.00	32.75	C
ATOM	1166	NE1	TRP	A	269	44.617	54.644	26.727	1.00	33.20	N
ATOM	1167	CE2	TRP	A	269	43.760	53.586	26.877	1.00	33.15	C
ATOM	1168	CE3	TRP	A	269	43.899	51.212	27.343	1.00	33.57	C
ATOM	1169	CZ2	TRP	A	269	42.363	53.539	26.798	1.00	33.93	C
ATOM	1170	CZ3	TRP	A	269	42.507	51.164	27.266	1.00	34.42	C
ATOM	1171	CH2	TRP	A	269	41.757	52.323	26.994	1.00	34.51	C
ATOM	1172	N	GLN	A	270	49.519	50.726	29.122	1.00	28.51	N
ATOM	1173	CA	GLN	A	270	50.610	49.755	29.209	1.00	28.61	C
ATOM	1174	C	GLN	A	270	50.460	48.941	30.490	1.00	28.10	C
ATOM	1175	O	GLN	A	270	50.699	47.736	30.499	1.00	28.60	O
ATOM	1176	CB	GLN	A	270	51.977	50.457	29.205	1.00	28.36	C
ATOM	1177	CG	GLN	A	270	52.238	51.315	27.977	1.00	28.23	C
ATOM	1178	CD	GLN	A	270	53.519	50.943	27.244	1.00	28.01	C

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ATOM	1179	OE1	GLN	A	270	54.445	50.374	27.825	1.00	27.19	O
ATOM	1180	NE2	GLN	A	270	53.581	51.282	25.963	1.00	26.48	N
ATOM	1181	N	LYS	A	271	50.072	49.604	31.575	1.00	28.37	N
ATOM	1182	CA	LYS	A	271	49.878	48.915	32.846	1.00	28.70	C
ATOM	1183	C	LYS	A	271	48.784	47.858	32.671	1.00	27.88	C
ATOM	1184	O	LYS	A	271	48.917	46.734	33.144	1.00	27.93	O
ATOM	1185	CB	LYS	A	271	49.476	49.912	33.941	1.00	29.92	C
ATOM	1186	CG	LYS	A	271	49.092	49.260	35.266	1.00	32.48	C
ATOM	1187	CD	LYS	A	271	48.701	50.309	36.300	1.00	34.72	C
ATOM	1188	CE	LYS	A	271	48.207	49.671	37.590	1.00	36.23	C
ATOM	1189	NZ	LYS	A	271	49.269	48.881	38.274	1.00	38.61	N
ATOM	1190	N	ILE	A	272	47.712	48.231	31.979	1.00	27.39	N
ATOM	1191	CA	ILE	A	272	46.592	47.326	31.726	1.00	27.48	C
ATOM	1192	C	ILE	A	272	47.036	46.124	30.902	1.00	26.99	C
ATOM	1193	O	ILE	A	272	46.668	44.989	31.195	1.00	27.02	O
ATOM	1194	CB	ILE	A	272	45.447	48.057	30.978	1.00	27.22	C
ATOM	1195	CG1	ILE	A	272	44.786	49.064	31.922	1.00	27.67	C
ATOM	1196	CG2	ILE	A	272	44.422	47.046	30.447	1.00	27.76	C
ATOM	1197	CD1	ILE	A	272	43.836	50.030	31.231	1.00	27.85	C
ATOM	1198	N	THR	A	273	47.831	46.377	29.868	1.00	26.65	N
ATOM	1199	CA	THR	A	273	48.322	45.306	29.010	1.00	26.53	C
ATOM	1200	C	THR	A	273	49.202	44.331	29.792	1.00	26.14	C
ATOM	1201	O	THR	A	273	49.041	43.114	29.694	1.00	25.79	O
ATOM	1202	CB	THR	A	273	49.120	45.878	27.824	1.00	26.74	C
ATOM	1203	OG1	THR	A	273	48.270	46.744	27.059	1.00	27.53	O
ATOM	1204	CG2	THR	A	273	49.626	44.752	26.928	1.00	27.26	C
ATOM	1205	N	ILE	A	274	50.134	44.863	30.571	1.00	26.20	N
ATOM	1206	CA	ILE	A	274	51.010	44.003	31.357	1.00	26.20	C
ATOM	1207	C	ILE	A	274	50.175	43.230	32.377	1.00	26.66	C
ATOM	1208	O	ILE	A	274	50.411	42.045	32.616	1.00	26.11	O
ATOM	1209	CB	ILE	A	274	52.080	44.821	32.096	1.00	25.86	C
ATOM	1210	CG1	ILE	A	274	52.942	45.581	31.082	1.00	26.16	C
ATOM	1211	CG2	ILE	A	274	52.950	43.895	32.945	1.00	25.61	C
ATOM	1212	CD1	ILE	A	274	53.895	46.583	31.715	1.00	27.00	C
ATOM	1213	N	GLY	A	275	49.194	43.908	32.966	1.00	26.98	N
ATOM	1214	CA	GLY	A	275	48.335	43.266	33.949	1.00	28.29	C
ATOM	1215	C	GLY	A	275	47.599	42.064	33.382	1.00	28.55	C
ATOM	1216	O	GLY	A	275	47.537	41.009	34.015	1.00	28.98	O
ATOM	1217	N	TRP	A	276	47.041	42.222	32.187	1.00	28.87	N
ATOM	1218	CA	TRP	A	276	46.312	41.145	31.526	1.00	28.90	C
ATOM	1219	C	TRP	A	276	47.246	39.963	31.270	1.00	29.40	C
ATOM	1220	O	TRP	A	276	46.864	38.802	31.453	1.00	29.24	O
ATOM	1221	CB	TRP	A	276	45.735	41.633	30.197	1.00	29.68	C
ATOM	1222	CG	TRP	A	276	44.847	40.631	29.531	1.00	30.48	C
ATOM	1223	CD1	TRP	A	276	43.513	40.429	29.766	1.00	30.71	C
ATOM	1224	CD2	TRP	A	276	45.230	39.673	28.539	1.00	30.72	C
ATOM	1225	NE1	TRP	A	276	43.043	39.405	28.977	1.00	30.48	N
ATOM	1226	CE2	TRP	A	276	44.075	38.922	28.214	1.00	31.35	C
ATOM	1227	CE3	TRP	A	276	46.437	39.373	27.891	1.00	31.18	C
ATOM	1228	CZ2	TRP	A	276	44.092	37.890	27.268	1.00	31.27	C
ATOM	1229	CZ3	TRP	A	276	46.455	38.344	26.951	1.00	31.86	C
ATOM	1230	CH2	TRP	A	276	45.287	37.616	26.649	1.00	31.77	C
ATOM	1231	N	ILE	A	277	48.472	40.256	30.844	1.00	28.84	N
ATOM	1232	CA	ILE	A	277	49.440	39.197	30.585	1.00	28.97	C
ATOM	1233	C	ILE	A	277	49.774	38.442	31.878	1.00	29.36	C
ATOM	1234	O	ILE	A	277	49.822	37.213	31.886	1.00	28.83	O
ATOM	1235	CB	ILE	A	277	50.740	39.765	29.950	1.00	28.28	C

TABLE 3

ATOM	1236	CG1	ILE	A	277	50.442	40.296	28.542	1.00	28.37	C
ATOM	1237	CG2	ILE	A	277	51.802	38.678	29.867	1.00	28.02	C
ATOM	1238	CD1	ILE	A	277	51.604	41.054	27.890	1.00	27.79	C
ATOM	1239	N	ARG	A	278	49.988	39.174	32.969	1.00	30.21	N
ATOM	1240	CA	ARG	A	278	50.312	38.551	34.254	1.00	31.53	C
ATOM	1241	C	ARG	A	278	49.173	37.683	34.776	1.00	33.21	C
ATOM	1242	O	ARG	A	278	49.400	36.609	35.334	1.00	33.46	O
ATOM	1243	CB	ARG	A	278	50.643	39.616	35.304	1.00	30.82	C
ATOM	1244	CG	ARG	A	278	51.957	40.335	35.071	1.00	30.23	C
ATOM	1245	CD	ARG	A	278	53.143	39.393	35.206	1.00	29.99	C
ATOM	1246	NE	ARG	A	278	54.382	40.066	34.832	1.00	28.97	N
ATOM	1247	CZ	ARG	A	278	55.148	39.711	33.806	1.00	28.64	C
ATOM	1248	NH1	ARG	A	278	54.812	38.677	33.044	1.00	26.58	N
ATOM	1249	NH2	ARG	A	278	56.243	40.409	33.530	1.00	27.89	N
ATOM	1250	N	GLU	A	279	47.949	38.168	34.597	1.00	34.74	N
ATOM	1251	CA	GLU	A	279	46.754	37.466	35.043	1.00	36.51	C
ATOM	1252	C	GLU	A	279	46.553	36.166	34.268	1.00	36.74	C
ATOM	1253	O	GLU	A	279	46.101	35.162	34.819	1.00	36.85	O
ATOM	1254	CB	GLU	A	279	45.541	38.384	34.859	1.00	38.13	C
ATOM	1255	CG	GLU	A	279	44.204	37.819	35.314	1.00	41.43	C
ATOM	1256	CD	GLU	A	279	43.065	38.828	35.182	1.00	43.32	C
ATOM	1257	OE1	GLU	A	279	41.902	38.449	35.442	1.00	44.56	O
ATOM	1258	OE2	GLU	A	279	43.327	40.002	34.823	1.00	44.56	O
ATOM	1259	N	LYS	A	280	46.915	36.183	32.991	1.00	36.37	N
ATOM	1260	CA	LYS	A	280	46.742	35.019	32.133	1.00	36.81	C
ATOM	1261	C	LYS	A	280	47.941	34.071	32.107	1.00	36.04	C
ATOM	1262	O	LYS	A	280	47.773	32.854	32.038	1.00	35.58	O
ATOM	1263	CB	LYS	A	280	46.433	35.495	30.710	1.00	38.33	C
ATOM	1264	CG	LYS	A	280	45.519	34.591	29.895	1.00	40.96	C
ATOM	1265	CD	LYS	A	280	46.185	33.281	29.512	1.00	42.35	C
ATOM	1266	CE	LYS	A	280	45.280	32.456	28.601	1.00	42.90	C
ATOM	1267	NZ	LYS	A	280	44.954	33.184	27.341	1.00	42.89	N
ATOM	1268	N	TYR	A	281	49.146	34.627	32.185	1.00	34.52	N
ATOM	1269	CA	TYR	A	281	50.362	33.826	32.100	1.00	33.39	C
ATOM	1270	C	TYR	A	281	51.328	33.919	33.274	1.00	33.09	C
ATOM	1271	O	TYR	A	281	52.334	33.214	33.297	1.00	33.09	O
ATOM	1272	CB	TYR	A	281	51.124	34.209	30.834	1.00	32.75	C
ATOM	1273	CG	TYR	A	281	50.356	34.016	29.549	1.00	32.31	C
ATOM	1274	CD1	TYR	A	281	50.221	32.752	28.976	1.00	32.30	C
ATOM	1275	CD2	TYR	A	281	49.785	35.103	28.889	1.00	32.48	C
ATOM	1276	CE1	TYR	A	281	49.541	32.577	27.774	1.00	32.47	C
ATOM	1277	CE2	TYR	A	281	49.104	34.939	27.691	1.00	32.55	C
ATOM	1278	CZ	TYR	A	281	48.987	33.674	27.138	1.00	32.49	C
ATOM	1279	OH	TYR	A	281	48.328	33.512	25.941	1.00	33.37	O
ATOM	1280	N	GLY	A	282	51.043	34.780	34.240	1.00	32.83	N
ATOM	1281	CA	GLY	A	282	51.961	34.919	35.355	1.00	32.77	C
ATOM	1282	C	GLY	A	282	53.284	35.449	34.826	1.00	33.10	C
ATOM	1283	O	GLY	A	282	53.305	36.220	33.863	1.00	32.17	O
ATOM	1284	N	ASP	A	283	54.391	35.041	35.436	1.00	33.13	N
ATOM	1285	CA	ASP	A	283	55.699	35.501	34.986	1.00	33.88	C
ATOM	1286	C	ASP	A	283	56.322	34.574	33.945	1.00	33.49	C
ATOM	1287	O	ASP	A	283	57.519	34.647	33.674	1.00	34.01	O
ATOM	1288	CB	ASP	A	283	56.637	35.665	36.184	1.00	34.83	C
ATOM	1289	CG	ASP	A	283	56.242	36.833	37.072	1.00	36.88	C
ATOM	1290	OD1	ASP	A	283	56.206	37.978	36.569	1.00	38.24	O
ATOM	1291	OD2	ASP	A	283	55.965	36.615	38.270	1.00	38.21	O
ATOM	1292	N	LYS	A	284	55.504	33.711	33.352	1.00	33.24	N

TABLE 3

ATOM	1293	CA	LYS	A	284	55.985	32.773	32.342	1.00	33.02	C
ATOM	1294	C	LYS	A	284	56.118	33.426	30.968	1.00	32.02	C
ATOM	1295	O	LYS	A	284	56.838	32.931	30.105	1.00	32.97	O
ATOM	1296	CB	LYS	A	284	55.058	31.551	32.275	1.00	34.39	C
ATOM	1297	CG	LYS	A	284	55.260	30.568	33.433	1.00	36.82	C
ATOM	1298	CD	LYS	A	284	55.284	31.281	34.783	1.00	38.42	C
ATOM	1299	CE	LYS	A	284	55.742	30.359	35.910	1.00	39.93	C
ATOM	1300	NZ	LYS	A	284	56.028	31.120	37.168	1.00	39.68	N
ATOM	1301	N	VAL	A	285	55.410	34.530	30.761	1.00	29.89	N
ATOM	1302	CA	VAL	A	285	55.510	35.259	29.502	1.00	28.50	C
ATOM	1303	C	VAL	A	285	56.233	36.566	29.813	1.00	27.10	C
ATOM	1304	O	VAL	A	285	55.816	37.326	30.691	1.00	27.10	O
ATOM	1305	CB	VAL	A	285	54.122	35.559	28.895	1.00	28.58	C
ATOM	1306	CG1	VAL	A	285	54.259	36.563	27.748	1.00	27.74	C
ATOM	1307	CG2	VAL	A	285	53.502	34.264	28.375	1.00	28.28	C
ATOM	1308	N	LYS	A	286	57.327	36.815	29.101	1.00	25.90	N
ATOM	1309	CA	LYS	A	286	58.125	38.014	29.317	1.00	24.52	C
ATOM	1310	C	LYS	A	286	57.671	39.148	28.410	1.00	24.47	C
ATOM	1311	O	LYS	A	286	57.419	38.944	27.222	1.00	24.28	O
ATOM	1312	CB	LYS	A	286	59.601	37.697	29.076	1.00	25.16	C
ATOM	1313	CG	LYS	A	286	60.112	36.510	29.893	1.00	24.27	C
ATOM	1314	CD	LYS	A	286	59.926	36.746	31.388	1.00	24.81	C
ATOM	1315	CE	LYS	A	286	60.396	35.544	32.204	1.00	25.83	C
ATOM	1316	NZ	LYS	A	286	60.194	35.749	33.670	1.00	24.86	N
ATOM	1317	N	VAL	A	287	57.574	40.347	28.972	1.00	24.27	N
ATOM	1318	CA	VAL	A	287	57.120	41.495	28.202	1.00	24.13	C
ATOM	1319	C	VAL	A	287	57.779	42.813	28.597	1.00	23.84	C
ATOM	1320	O	VAL	A	287	57.687	43.255	29.743	1.00	23.87	O
ATOM	1321	CB	VAL	A	287	55.573	41.644	28.308	1.00	24.31	C
ATOM	1322	CG1	VAL	A	287	55.146	41.662	29.769	1.00	25.02	C
ATOM	1323	CG2	VAL	A	287	55.114	42.923	27.609	1.00	24.49	C
ATOM	1324	N	GLY	A	288	58.456	43.428	27.634	1.00	23.20	N
ATOM	1325	CA	GLY	A	288	59.097	44.707	27.882	1.00	22.85	C
ATOM	1326	C	GLY	A	288	58.077	45.801	27.643	1.00	22.44	C
ATOM	1327	O	GLY	A	288	57.018	45.548	27.063	1.00	22.27	O
ATOM	1328	N	ALA	A	289	58.383	47.014	28.088	1.00	22.59	N
ATOM	1329	CA	ALA	A	289	57.468	48.139	27.922	1.00	23.01	C
ATOM	1330	C	ALA	A	289	58.248	49.422	27.682	1.00	23.15	C
ATOM	1331	O	ALA	A	289	59.438	49.498	27.976	1.00	23.72	O
ATOM	1332	CB	ALA	A	289	56.573	48.287	29.168	1.00	23.19	C
ATOM	1333	N	GLY	A	290	57.565	50.427	27.144	1.00	23.69	N
ATOM	1334	CA	GLY	A	290	58.205	51.698	26.856	1.00	23.22	C
ATOM	1335	C	GLY	A	290	57.432	52.435	25.775	1.00	23.29	C
ATOM	1336	O	GLY	A	290	56.397	51.945	25.320	1.00	22.89	O
ATOM	1337	N	ASN	A	291	57.937	53.582	25.324	1.00	22.88	N
ATOM	1338	CA	ASN	A	291	59.199	54.155	25.787	1.00	22.55	C
ATOM	1339	C	ASN	A	291	59.028	55.263	26.817	1.00	22.60	C
ATOM	1340	O	ASN	A	291	58.024	55.974	26.817	1.00	22.43	O
ATOM	1341	CB	ASN	A	291	59.977	54.727	24.592	1.00	22.24	C
ATOM	1342	CG	ASN	A	291	60.565	53.651	23.708	1.00	22.60	C
ATOM	1343	OD1	ASN	A	291	60.148	52.493	23.758	1.00	21.74	O
ATOM	1344	ND2	ASN	A	291	61.538	54.029	22.884	1.00	21.50	N
ATOM	1345	N	ILE	A	292	60.028	55.404	27.685	1.00	22.32	N
ATOM	1346	CA	ILE	A	292	60.031	56.448	28.702	1.00	22.58	C
ATOM	1347	C	ILE	A	292	61.391	57.144	28.669	1.00	22.53	C
ATOM	1348	O	ILE	A	292	62.327	56.651	28.033	1.00	22.76	O
ATOM	1349	CB	ILE	A	292	59.722	55.879	30.123	1.00	22.99	C

TABLE 3

ATOM	1350	CG1	ILE	A	292	60.591	54.655	30.437	1.00	22.90	C
ATOM	1351	CG2	ILE	A	292	58.243	55.506	30.208	1.00	23.43	C
ATOM	1352	CD1	ILE	A	292	62.040	54.972	30.767	1.00	23.93	C
ATOM	1353	N	VAL	A	293	61.502	58.296	29.322	1.00	22.08	N
ATOM	1354	CA	VAL	A	293	62.765	59.028	29.320	1.00	22.29	C
ATOM	1355	C	VAL	A	293	63.201	59.555	30.678	1.00	22.70	C
ATOM	1356	O	VAL	A	293	64.187	60.282	30.766	1.00	22.85	O
ATOM	1357	CB	VAL	A	293	62.720	60.228	28.346	1.00	22.95	C
ATOM	1358	CG1	VAL	A	293	62.595	59.730	26.906	1.00	22.15	C
ATOM	1359	CG2	VAL	A	293	61.550	61.148	28.706	1.00	22.40	C
ATOM	1360	N	ASP	A	294	62.474	59.209	31.736	1.00	22.82	N
ATOM	1361	CA	ASP	A	294	62.851	59.680	33.060	1.00	23.34	C
ATOM	1362	C	ASP	A	294	62.532	58.660	34.145	1.00	23.54	C
ATOM	1363	O	ASP	A	294	61.897	57.634	33.880	1.00	23.02	O
ATOM	1364	CB	ASP	A	294	62.181	61.040	33.365	1.00	23.61	C
ATOM	1365	CG	ASP	A	294	60.680	60.934	33.635	1.00	24.61	C
ATOM	1366	OD1	ASP	A	294	60.057	59.898	33.323	1.00	25.36	O
ATOM	1367	OD2	ASP	A	294	60.115	61.921	34.158	1.00	24.53	O
ATOM	1368	N	GLY	A	295	62.991	58.943	35.359	1.00	23.57	N
ATOM	1369	CA	GLY	A	295	62.762	58.043	36.474	1.00	24.71	C
ATOM	1370	C	GLY	A	295	61.300	57.752	36.756	1.00	24.99	C
ATOM	1371	O	GLY	A	295	60.943	56.611	37.038	1.00	24.55	O
ATOM	1372	N	GLU	A	296	60.455	58.777	36.692	1.00	25.66	N
ATOM	1373	CA	GLU	A	296	59.022	58.603	36.943	1.00	26.31	C
ATOM	1374	C	GLU	A	296	58.413	57.575	36.001	1.00	25.52	C
ATOM	1375	O	GLU	A	296	57.635	56.715	36.421	1.00	24.66	O
ATOM	1376	CB	GLU	A	296	58.269	59.924	36.759	1.00	28.85	C
ATOM	1377	CG	GLU	A	296	58.342	60.889	37.927	1.00	33.07	C
ATOM	1378	CD	GLU	A	296	57.642	62.208	37.621	1.00	36.15	C
ATOM	1379	OE1	GLU	A	296	56.485	62.181	37.130	1.00	37.36	O
ATOM	1380	OE2	GLU	A	296	58.250	63.272	37.871	1.00	38.01	O
ATOM	1381	N	GLY	A	297	58.750	57.687	34.721	1.00	25.01	N
ATOM	1382	CA	GLY	A	297	58.227	56.761	33.733	1.00	24.76	C
ATOM	1383	C	GLY	A	297	58.735	55.353	33.981	1.00	24.56	C
ATOM	1384	O	GLY	A	297	57.976	54.384	33.891	1.00	24.54	O
ATOM	1385	N	PHE	A	298	60.026	55.238	34.279	1.00	23.53	N
ATOM	1386	CA	PHE	A	298	60.628	53.938	34.559	1.00	23.73	C
ATOM	1387	C	PHE	A	298	59.904	53.288	35.737	1.00	23.95	C
ATOM	1388	O	PHE	A	298	59.470	52.140	35.659	1.00	23.92	O
ATOM	1389	CB	PHE	A	298	62.107	54.091	34.926	1.00	22.70	C
ATOM	1390	CG	PHE	A	298	62.710	52.844	35.510	1.00	22.74	C
ATOM	1391	CD1	PHE	A	298	63.206	51.841	34.685	1.00	22.49	C
ATOM	1392	CD2	PHE	A	298	62.702	52.636	36.885	1.00	22.82	C
ATOM	1393	CE1	PHE	A	298	63.680	50.645	35.223	1.00	22.80	C
ATOM	1394	CE2	PHE	A	298	63.171	51.447	37.433	1.00	22.71	C
ATOM	1395	CZ	PHE	A	298	63.659	50.448	36.599	1.00	22.47	C
ATOM	1396	N	ARG	A	299	59.800	54.043	36.829	1.00	24.49	N
ATOM	1397	CA	ARG	A	299	59.158	53.588	38.062	1.00	25.88	C
ATOM	1398	C	ARG	A	299	57.736	53.090	37.833	1.00	25.06	C
ATOM	1399	O	ARG	A	299	57.323	52.074	38.402	1.00	24.51	O
ATOM	1400	CB	ARG	A	299	59.154	54.735	39.080	1.00	28.63	C
ATOM	1401	CG	ARG	A	299	58.300	54.510	40.313	1.00	32.44	C
ATOM	1402	CD	ARG	A	299	59.044	53.764	41.400	1.00	35.12	C
ATOM	1403	NE	ARG	A	299	60.302	54.414	41.772	1.00	37.30	N
ATOM	1404	CZ	ARG	A	299	61.032	54.061	42.827	1.00	37.36	C
ATOM	1405	NH1	ARG	A	299	60.620	53.077	43.614	1.00	37.31	N
ATOM	1406	NH2	ARG	A	299	62.186	54.665	43.079	1.00	37.90	N

TABLE 3

ATOM	1407	N	TYR	A	300	56.987	53.804	36.998	1.00	23.80	N
ATOM	1408	CA	TYR	A	300	55.615	53.413	36.717	1.00	23.18	C
ATOM	1409	C	TYR	A	300	55.549	52.050	36.022	1.00	22.98	C
ATOM	1410	O	TYR	A	300	54.760	51.189	36.405	1.00	22.25	O
ATOM	1411	CB	TYR	A	300	54.929	54.460	35.837	1.00	23.21	C
ATOM	1412	CG	TYR	A	300	53.474	54.153	35.573	1.00	23.56	C
ATOM	1413	CD1	TYR	A	300	52.505	54.362	36.560	1.00	24.05	C
ATOM	1414	CD2	TYR	A	300	53.066	53.632	34.349	1.00	23.81	C
ATOM	1415	CE1	TYR	A	300	51.164	54.059	36.325	1.00	24.38	C
ATOM	1416	CE2	TYR	A	300	51.734	53.325	34.105	1.00	24.00	C
ATOM	1417	CZ	TYR	A	300	50.790	53.540	35.094	1.00	23.95	C
ATOM	1418	OH	TYR	A	300	49.474	53.239	34.845	1.00	24.48	O
ATOM	1419	N	LEU	A	301	56.372	51.857	34.996	1.00	21.97	N
ATOM	1420	CA	LEU	A	301	56.366	50.592	34.274	1.00	22.14	C
ATOM	1421	C	LEU	A	301	56.991	49.463	35.102	1.00	22.14	C
ATOM	1422	O	LEU	A	301	56.625	48.298	34.947	1.00	22.36	O
ATOM	1423	CB	LEU	A	301	57.081	50.741	32.920	1.00	21.32	C
ATOM	1424	CG	LEU	A	301	56.381	51.668	31.909	1.00	21.51	C
ATOM	1425	CD1	LEU	A	301	57.204	51.757	30.618	1.00	21.05	C
ATOM	1426	CD2	LEU	A	301	54.972	51.136	31.607	1.00	21.05	C
ATOM	1427	N	ALA	A	302	57.925	49.808	35.984	1.00	22.39	N
ATOM	1428	CA	ALA	A	302	58.559	48.799	36.833	1.00	23.49	C
ATOM	1429	C	ALA	A	302	57.500	48.240	37.790	1.00	24.06	C
ATOM	1430	O	ALA	A	302	57.357	47.022	37.937	1.00	23.67	O
ATOM	1431	CB	ALA	A	302	59.708	49.415	37.625	1.00	22.59	C
ATOM	1432	N	ASP	A	303	56.760	49.138	38.432	1.00	24.53	N
ATOM	1433	CA	ASP	A	303	55.709	48.734	39.360	1.00	26.12	C
ATOM	1434	C	ASP	A	303	54.589	48.010	38.614	1.00	26.16	C
ATOM	1435	O	ASP	A	303	53.891	47.179	39.194	1.00	26.12	O
ATOM	1436	CB	ASP	A	303	55.121	49.948	40.094	1.00	27.14	C
ATOM	1437	CG	ASP	A	303	56.086	50.560	41.103	1.00	28.94	C
ATOM	1438	OD1	ASP	A	303	56.998	49.856	41.586	1.00	30.42	O
ATOM	1439	OD2	ASP	A	303	55.916	51.751	41.432	1.00	30.69	O
ATOM	1440	N	ALA	A	304	54.416	48.333	37.332	1.00	25.47	N
ATOM	1441	CA	ALA	A	304	53.386	47.695	36.517	1.00	25.15	C
ATOM	1442	C	ALA	A	304	53.755	46.246	36.196	1.00	25.19	C
ATOM	1443	O	ALA	A	304	52.895	45.451	35.811	1.00	24.86	O
ATOM	1444	CB	ALA	A	304	53.172	48.472	35.233	1.00	24.93	C
ATOM	1445	N	GLY	A	305	55.035	45.909	36.337	1.00	24.65	N
ATOM	1446	CA	GLY	A	305	55.461	44.540	36.086	1.00	24.64	C
ATOM	1447	C	GLY	A	305	56.306	44.266	34.851	1.00	24.36	C
ATOM	1448	O	GLY	A	305	56.597	43.107	34.547	1.00	24.74	O
ATOM	1449	N	ALA	A	306	56.711	45.311	34.140	1.00	23.62	N
ATOM	1450	CA	ALA	A	306	57.521	45.136	32.935	1.00	23.66	C
ATOM	1451	C	ALA	A	306	58.803	44.351	33.214	1.00	23.20	C
ATOM	1452	O	ALA	A	306	59.430	44.532	34.256	1.00	23.66	O
ATOM	1453	CB	ALA	A	306	57.866	46.499	32.336	1.00	22.87	C
ATOM	1454	N	ASP	A	307	59.188	43.490	32.274	1.00	23.16	N
ATOM	1455	CA	ASP	A	307	60.398	42.679	32.406	1.00	22.69	C
ATOM	1456	C	ASP	A	307	61.659	43.439	31.998	1.00	22.59	C
ATOM	1457	O	ASP	A	307	62.764	43.098	32.415	1.00	22.56	O
ATOM	1458	CB	ASP	A	307	60.243	41.391	31.601	1.00	23.45	C
ATOM	1459	CG	ASP	A	307	59.292	40.424	32.267	1.00	23.60	C
ATOM	1460	OD1	ASP	A	307	59.626	39.963	33.375	1.00	24.19	O
ATOM	1461	OD2	ASP	A	307	58.217	40.144	31.705	1.00	23.04	O
ATOM	1462	N	PHE	A	308	61.482	44.453	31.159	1.00	22.02	N
ATOM	1463	CA	PHE	A	308	62.571	45.334	30.756	1.00	21.84	C

TABLE 3

ATOM	1464	C	PHE A 308	61.903	46.608	30.264	1.00	21.93	C
ATOM	1465	O	PHE A 308	60.755	46.587	29.809	1.00	20.69	O
ATOM	1466	CB	PHE A 308	63.505	44.695	29.700	1.00	21.68	C
ATOM	1467	CG	PHE A 308	62.928	44.596	28.312	1.00	22.97	C
ATOM	1468	CD1	PHE A 308	62.892	45.707	27.470	1.00	23.01	C
ATOM	1469	CD2	PHE A 308	62.487	43.369	27.820	1.00	22.89	C
ATOM	1470	CE1	PHE A 308	62.431	45.596	26.153	1.00	23.45	C
ATOM	1471	CE2	PHE A 308	62.023	43.245	26.504	1.00	23.97	C
ATOM	1472	CZ	PHE A 308	61.998	44.362	25.669	1.00	23.35	C
ATOM	1473	N	ILE A 309	62.609	47.724	30.381	1.00	20.99	N
ATOM	1474	CA	ILE A 309	62.040	49.001	29.994	1.00	21.61	C
ATOM	1475	C	ILE A 309	62.877	49.704	28.929	1.00	21.29	C
ATOM	1476	O	ILE A 309	64.096	49.835	29.071	1.00	20.03	O
ATOM	1477	CB	ILE A 309	61.866	49.881	31.264	1.00	21.66	C
ATOM	1478	CG1	ILE A 309	60.841	49.204	32.189	1.00	22.00	C
ATOM	1479	CG2	ILE A 309	61.444	51.298	30.886	1.00	20.92	C
ATOM	1480	CD1	ILE A 309	60.725	49.797	33.575	1.00	22.70	C
ATOM	1481	N	LYS A 310	62.212	50.132	27.854	1.00	21.58	N
ATOM	1482	CA	LYS A 310	62.884	50.809	26.745	1.00	21.98	C
ATOM	1483	C	LYS A 310	62.919	52.317	26.942	1.00	21.74	C
ATOM	1484	O	LYS A 310	61.907	52.942	27.271	1.00	21.19	O
ATOM	1485	CB	LYS A 310	62.211	50.489	25.404	1.00	23.35	C
ATOM	1486	CG	LYS A 310	62.440	49.071	24.915	1.00	26.33	C
ATOM	1487	CD	LYS A 310	62.448	48.987	23.377	1.00	24.86	C
ATOM	1488	CE	LYS A 310	61.072	49.221	22.764	1.00	26.09	C
ATOM	1489	NZ	LYS A 310	60.922	50.568	22.124	1.00	25.19	N
ATOM	1490	N	ILE A 311	64.093	52.890	26.704	1.00	20.80	N
ATOM	1491	CA	ILE A 311	64.330	54.319	26.888	1.00	20.47	C
ATOM	1492	C	ILE A 311	64.496	55.076	25.578	1.00	20.59	C
ATOM	1493	O	ILE A 311	65.258	54.658	24.707	1.00	20.84	O
ATOM	1494	CB	ILE A 311	65.625	54.543	27.695	1.00	19.79	C
ATOM	1495	CG1	ILE A 311	65.544	53.813	29.039	1.00	19.38	C
ATOM	1496	CG2	ILE A 311	65.876	56.037	27.885	1.00	19.52	C
ATOM	1497	CD1	ILE A 311	66.917	53.602	29.686	1.00	19.29	C
ATOM	1498	N	GLY A 312	63.796	56.197	25.444	1.00	21.35	N
ATOM	1499	CA	GLY A 312	63.962	56.992	24.247	1.00	22.14	C
ATOM	1500	C	GLY A 312	62.738	57.526	23.542	1.00	22.59	C
ATOM	1501	O	GLY A 312	61.877	56.771	23.106	1.00	22.49	O
ATOM	1502	N	ILE A 313	62.670	58.847	23.430	1.00	23.41	N
ATOM	1503	CA	ILE A 313	61.577	59.497	22.725	1.00	24.56	C
ATOM	1504	C	ILE A 313	62.156	60.654	21.912	1.00	25.54	C
ATOM	1505	O	ILE A 313	62.786	61.553	22.467	1.00	24.97	O
ATOM	1506	CB	ILE A 313	60.505	60.047	23.692	1.00	24.81	C
ATOM	1507	CG1	ILE A 313	59.855	58.896	24.471	1.00	24.74	C
ATOM	1508	CG2	ILE A 313	59.447	60.804	22.904	1.00	25.11	C
ATOM	1509	CD1	ILE A 313	58.854	59.350	25.526	1.00	25.63	C
ATOM	1510	N	GLY A 314	61.962	60.609	20.596	1.00	27.37	N
ATOM	1511	CA	GLY A 314	62.451	61.673	19.729	1.00	29.50	C
ATOM	1512	C	GLY A 314	63.927	61.641	19.369	1.00	31.01	C
ATOM	1513	O	GLY A 314	64.422	62.554	18.706	1.00	32.03	O
ATOM	1514	N	GLY A 315	64.636	60.598	19.791	1.00	31.66	N
ATOM	1515	CA	GLY A 315	66.056	60.505	19.490	1.00	32.68	C
ATOM	1516	C	GLY A 315	66.396	59.643	18.285	1.00	33.40	C
ATOM	1517	O	GLY A 315	67.553	59.576	17.876	1.00	33.37	O
ATOM	1518	N	GLY A 316	65.396	58.985	17.710	1.00	34.10	N
ATOM	1519	CA	GLY A 316	65.644	58.137	16.555	1.00	35.23	C
ATOM	1520	C	GLY A 316	66.065	58.913	15.319	1.00	36.50	C

TABLE 3

ATOM	1521	O	GLY A 316	65.677	60.070	15.141	1.00	36.03	O
ATOM	1522	N	SER A 317	66.857	58.276	14.460	1.00	37.55	N
ATOM	1523	CA	SER A 317	67.337	58.911	13.236	1.00	39.31	C
ATOM	1524	C	SER A 317	66.171	59.337	12.356	1.00	40.68	C
ATOM	1525	O	SER A 317	66.295	60.251	11.543	1.00	40.52	O
ATOM	1526	CB	SER A 317	68.240	57.951	12.453	1.00	38.70	C
ATOM	1527	OG	SER A 317	67.512	56.826	11.980	1.00	38.86	O
ATOM	1528	N	ILE A 318	65.040	58.663	12.522	1.00	42.85	N
ATOM	1529	CA	ILE A 318	63.842	58.960	11.751	1.00	45.43	C
ATOM	1530	C	ILE A 318	63.419	60.410	11.977	1.00	47.03	C
ATOM	1531	O	ILE A 318	62.896	61.062	11.074	1.00	47.28	O
ATOM	1532	CB	ILE A 318	62.667	58.043	12.165	1.00	45.77	C
ATOM	1533	CG1	ILE A 318	63.127	56.586	12.239	1.00	46.41	C
ATOM	1534	CG2	ILE A 318	61.541	58.171	11.171	1.00	46.37	C
ATOM	1535	CD1	ILE A 318	63.984	56.265	13.459	1.00	46.06	C
HETATM	1536	N	CSO A 319	63.652	60.907	13.188	1.00	48.82	N
HETATM	1537	CA	CSO A 319	63.290	62.276	13.544	1.00	51.09	C
HETATM	1538	CB	CSO A 319	63.435	62.481	15.053	1.00	50.48	C
HETATM	1539	SG	CSO A 319	62.220	61.534	16.020	1.00	49.21	S
HETATM	1540	C	CSO A 319	64.088	63.347	12.809	1.00	52.89	C
HETATM	1541	O	CSO A 319	63.690	64.513	12.782	1.00	53.33	O
HETATM	1542	OD	CSO A 319	60.509	62.125	15.865	1.00	49.59	O
ATOM	1543	N	ILE A 320	65.210	62.955	12.215	1.00	54.92	N
ATOM	1544	CA	ILE A 320	66.048	63.899	11.484	1.00	56.96	C
ATOM	1545	C	ILE A 320	65.262	64.568	10.360	1.00	58.10	C
ATOM	1546	O	ILE A 320	65.443	65.756	10.083	1.00	58.63	O
ATOM	1547	CB	ILE A 320	67.279	63.197	10.873	1.00	57.26	C
ATOM	1548	CG1	ILE A 320	68.121	62.562	11.983	1.00	57.57	C
ATOM	1549	CG2	ILE A 320	68.113	64.201	10.089	1.00	57.46	C
ATOM	1550	CD1	ILE A 320	69.282	61.731	11.473	1.00	57.71	C
ATOM	1551	N	THR A 321	64.389	63.801	9.714	1.00	59.12	N
ATOM	1552	CA	THR A 321	63.583	64.323	8.618	1.00	60.34	C
ATOM	1553	C	THR A 321	62.103	64.387	8.985	1.00	60.84	C
ATOM	1554	O	THR A 321	61.257	63.773	8.330	1.00	61.34	O
ATOM	1555	CB	THR A 321	63.755	63.464	7.352	1.00	60.65	C
ATOM	1556	OG1	THR A 321	63.414	62.105	7.647	1.00	61.41	O
ATOM	1557	CG2	THR A 321	65.195	63.524	6.860	1.00	60.98	C
ATOM	1558	N	ARG A 322	61.806	65.138	10.040	1.00	61.12	N
ATOM	1559	CA	ARG A 322	60.441	65.314	10.523	1.00	61.24	C
ATOM	1560	C	ARG A 322	60.445	66.385	11.606	1.00	60.69	C
ATOM	1561	O	ARG A 322	61.501	66.723	12.145	1.00	60.84	O
ATOM	1562	CB	ARG A 322	59.901	63.994	11.080	1.00	62.07	C
ATOM	1563	CG	ARG A 322	58.509	64.074	11.698	1.00	63.32	C
ATOM	1564	CD	ARG A 322	57.518	64.813	10.804	1.00	64.42	C
ATOM	1565	NE	ARG A 322	57.486	64.287	9.442	1.00	65.37	N
ATOM	1566	CZ	ARG A 322	56.737	64.792	8.466	1.00	65.78	C
ATOM	1567	NH1	ARG A 322	55.955	65.838	8.702	1.00	65.97	N
ATOM	1568	NH2	ARG A 322	56.774	64.258	7.253	1.00	65.94	N
ATOM	1569	N	GLU A 323	59.272	66.925	11.919	1.00	59.94	N
ATOM	1570	CA	GLU A 323	59.174	67.960	12.940	1.00	59.06	C
ATOM	1571	C	GLU A 323	58.885	67.393	14.325	1.00	57.87	C
ATOM	1572	O	GLU A 323	58.236	66.355	14.466	1.00	57.61	O
ATOM	1573	CB	GLU A 323	58.096	68.981	12.570	1.00	59.76	C
ATOM	1574	CG	GLU A 323	57.938	70.098	13.597	1.00	60.62	C
ATOM	1575	CD	GLU A 323	59.243	70.833	13.897	1.00	61.14	C
ATOM	1576	OE1	GLU A 323	59.296	71.537	14.928	1.00	61.68	O
ATOM	1577	OE2	GLU A 323	60.211	70.719	13.113	1.00	61.24	O



TABLE 3

ATOM	1578	N	GLN	A	324	59.379	68.091	15.343	1.00	56.34	N
ATOM	1579	CA	GLN	A	324	59.192	67.685	16.729	1.00	54.78	C
ATOM	1580	C	GLN	A	324	57.726	67.648	17.141	1.00	53.18	C
ATOM	1581	O	GLN	A	324	56.947	68.537	16.794	1.00	53.10	O
ATOM	1582	CB	GLN	A	324	59.956	68.634	17.658	1.00	55.79	C
ATOM	1583	CG	GLN	A	324	61.319	68.127	18.094	1.00	56.75	C
ATOM	1584	CD	GLN	A	324	61.220	66.843	18.891	1.00	57.57	C
ATOM	1585	OE1	GLN	A	324	60.430	66.746	19.830	1.00	58.20	O
ATOM	1586	NE2	GLN	A	324	62.025	65.849	18.524	1.00	58.36	N
ATOM	1587	N	LYS	A	325	57.357	66.607	17.880	1.00	50.98	N
ATOM	1588	CA	LYS	A	325	55.992	66.461	18.367	1.00	48.78	C
ATOM	1589	C	LYS	A	325	55.860	67.276	19.651	1.00	46.62	C
ATOM	1590	O	LYS	A	325	54.757	67.518	20.140	1.00	47.07	O
ATOM	1591	CB	LYS	A	325	55.680	64.987	18.648	1.00	49.79	C
ATOM	1592	CG	LYS	A	325	54.374	64.759	19.405	1.00	50.84	C
ATOM	1593	CD	LYS	A	325	54.094	63.274	19.607	1.00	51.53	C
ATOM	1594	CE	LYS	A	325	53.023	63.046	20.668	1.00	51.83	C
ATOM	1595	NZ	LYS	A	325	51.726	63.694	20.333	1.00	52.33	N
ATOM	1596	N	GLY	A	326	56.997	67.701	20.193	1.00	43.50	N
ATOM	1597	CA	GLY	A	326	56.973	68.490	21.409	1.00	40.48	C
ATOM	1598	C	GLY	A	326	57.413	67.734	22.648	1.00	38.13	C
ATOM	1599	O	GLY	A	326	57.736	68.347	23.664	1.00	37.44	O
ATOM	1600	N	ILE	A	327	57.422	66.405	22.569	1.00	36.05	N
ATOM	1601	CA	ILE	A	327	57.836	65.579	23.696	1.00	34.00	C
ATOM	1602	C	ILE	A	327	59.153	64.882	23.381	1.00	32.98	C
ATOM	1603	O	ILE	A	327	59.400	64.481	22.244	1.00	32.36	O
ATOM	1604	CB	ILE	A	327	56.776	64.498	24.037	1.00	34.45	C
ATOM	1605	CG1	ILE	A	327	56.576	63.557	22.845	1.00	34.20	C
ATOM	1606	CG2	ILE	A	327	55.453	65.165	24.413	1.00	34.27	C
ATOM	1607	CD1	ILE	A	327	55.626	62.390	23.132	1.00	35.32	C
ATOM	1608	N	GLY	A	328	60.001	64.741	24.390	1.00	31.07	N
ATOM	1609	CA	GLY	A	328	61.268	64.078	24.166	1.00	29.89	C
ATOM	1610	C	GLY	A	328	62.337	64.489	25.151	1.00	28.34	C
ATOM	1611	O	GLY	A	328	62.082	65.254	26.080	1.00	27.64	O
ATOM	1612	N	ARG	A	329	63.545	63.980	24.930	1.00	26.67	N
ATOM	1613	CA	ARG	A	329	64.669	64.283	25.797	1.00	25.93	C
ATOM	1614	C	ARG	A	329	65.940	63.749	25.142	1.00	24.65	C
ATOM	1615	O	ARG	A	329	65.904	62.714	24.485	1.00	24.97	O
ATOM	1616	CB	ARG	A	329	64.458	63.605	27.154	1.00	25.47	C
ATOM	1617	CG	ARG	A	329	65.375	64.095	28.248	1.00	25.11	C
ATOM	1618	CD	ARG	A	329	65.056	63.413	29.568	1.00	24.72	C
ATOM	1619	NE	ARG	A	329	65.626	64.149	30.692	1.00	24.50	N
ATOM	1620	CZ	ARG	A	329	65.577	63.743	31.955	1.00	25.99	C
ATOM	1621	NH1	ARG	A	329	64.986	62.595	32.267	1.00	24.83	N
ATOM	1622	NH2	ARG	A	329	66.104	64.497	32.909	1.00	26.04	N
ATOM	1623	N	GLY	A	330	67.054	64.458	25.304	1.00	24.47	N
ATOM	1624	CA	GLY	A	330	68.305	63.977	24.737	1.00	24.08	C
ATOM	1625	C	GLY	A	330	68.487	62.533	25.182	1.00	24.18	C
ATOM	1626	O	GLY	A	330	68.292	62.222	26.358	1.00	22.92	O
ATOM	1627	N	GLN	A	331	68.857	61.655	24.254	1.00	24.04	N
ATOM	1628	CA	GLN	A	331	69.022	60.230	24.551	1.00	24.22	C
ATOM	1629	C	GLN	A	331	70.004	59.909	25.679	1.00	24.49	C
ATOM	1630	O	GLN	A	331	69.737	59.033	26.503	1.00	24.57	O
ATOM	1631	CB	GLN	A	331	69.445	59.470	23.286	1.00	24.17	C
ATOM	1632	CG	GLN	A	331	69.411	57.946	23.436	1.00	24.47	C
ATOM	1633	CD	GLN	A	331	67.988	57.392	23.540	1.00	25.33	C
ATOM	1634	OE1	GLN	A	331	67.777	56.262	23.989	1.00	25.75	O

TABLE 3

ATOM	1635	NE2	GLN	A	331	67.013	58.183	23.112	1.00	24.22	N
ATOM	1636	N	ALA	A	332	71.139	60.602	25.713	1.00	23.98	N
ATOM	1637	CA	ALA	A	332	72.138	60.355	26.746	1.00	23.64	C
ATOM	1638	C	ALA	A	332	71.576	60.692	28.124	1.00	23.77	C
ATOM	1639	O	ALA	A	332	71.673	59.892	29.058	1.00	22.81	O
ATOM	1640	CB	ALA	A	332	73.403	61.176	26.470	1.00	23.79	C
ATOM	1641	N	THR	A	333	70.982	61.875	28.245	1.00	23.32	N
ATOM	1642	CA	THR	A	333	70.401	62.302	29.510	1.00	23.16	C
ATOM	1643	C	THR	A	333	69.294	61.345	29.954	1.00	23.11	C
ATOM	1644	O	THR	A	333	69.163	61.040	31.144	1.00	22.07	O
ATOM	1645	CB	THR	A	333	69.814	63.717	29.398	1.00	23.96	C
ATOM	1646	OG1	THR	A	333	70.838	64.619	28.960	1.00	25.42	O
ATOM	1647	CG2	THR	A	333	69.273	64.179	30.749	1.00	24.50	C
ATOM	1648	N	ALA	A	334	68.497	60.884	28.995	1.00	22.70	N
ATOM	1649	CA	ALA	A	334	67.407	59.959	29.292	1.00	23.13	C
ATOM	1650	C	ALA	A	334	67.949	58.654	29.886	1.00	22.44	C
ATOM	1651	O	ALA	A	334	67.456	58.175	30.907	1.00	22.81	O
ATOM	1652	CB	ALA	A	334	66.602	59.671	28.020	1.00	22.10	C
ATOM	1653	N	VAL	A	335	68.965	58.085	29.251	1.00	22.20	N
ATOM	1654	CA	VAL	A	335	69.556	56.840	29.737	1.00	21.98	C
ATOM	1655	C	VAL	A	335	70.150	57.026	31.134	1.00	22.34	C
ATOM	1656	O	VAL	A	335	69.869	56.249	32.047	1.00	22.57	O
ATOM	1657	CB	VAL	A	335	70.656	56.334	28.765	1.00	23.03	C
ATOM	1658	CG1	VAL	A	335	71.411	55.152	29.378	1.00	22.63	C
ATOM	1659	CG2	VAL	A	335	70.015	55.917	27.440	1.00	22.29	C
ATOM	1660	N	ILE	A	336	70.952	58.071	31.302	1.00	22.70	N
ATOM	1661	CA	ILE	A	336	71.588	58.352	32.583	1.00	23.12	C
ATOM	1662	C	ILE	A	336	70.569	58.499	33.710	1.00	23.63	C
ATOM	1663	O	ILE	A	336	70.751	57.941	34.796	1.00	23.32	O
ATOM	1664	CB	ILE	A	336	72.437	59.636	32.498	1.00	23.30	C
ATOM	1665	CG1	ILE	A	336	73.614	59.406	31.545	1.00	23.03	C
ATOM	1666	CG2	ILE	A	336	72.929	60.044	33.888	1.00	23.03	C
ATOM	1667	CD1	ILE	A	336	74.395	60.668	31.215	1.00	23.69	C
ATOM	1668	N	ASP	A	337	69.500	59.248	33.449	1.00	24.24	N
ATOM	1669	CA	ASP	A	337	68.457	59.471	34.447	1.00	24.71	C
ATOM	1670	C	ASP	A	337	67.713	58.179	34.777	1.00	24.54	C
ATOM	1671	O	ASP	A	337	67.506	57.849	35.947	1.00	24.97	O
ATOM	1672	CB	ASP	A	337	67.446	60.505	33.948	1.00	25.62	C
ATOM	1673	CG	ASP	A	337	66.441	60.891	35.016	1.00	27.13	C
ATOM	1674	OD1	ASP	A	337	65.279	61.195	34.679	1.00	27.55	O
ATOM	1675	OD2	ASP	A	337	66.821	60.902	36.202	1.00	29.34	O
ATOM	1676	N	VAL	A	338	67.293	57.455	33.743	1.00	23.33	N
ATOM	1677	CA	VAL	A	338	66.569	56.206	33.953	1.00	22.60	C
ATOM	1678	C	VAL	A	338	67.430	55.171	34.672	1.00	22.27	C
ATOM	1679	O	VAL	A	338	66.948	54.471	35.557	1.00	21.72	O
ATOM	1680	CB	VAL	A	338	66.075	55.611	32.615	1.00	22.51	C
ATOM	1681	CG1	VAL	A	338	65.518	54.204	32.839	1.00	21.86	C
ATOM	1682	CG2	VAL	A	338	64.985	56.514	32.023	1.00	21.22	C
ATOM	1683	N	VAL	A	339	68.700	55.078	34.284	1.00	22.03	N
ATOM	1684	CA	VAL	A	339	69.622	54.129	34.903	1.00	21.70	C
ATOM	1685	C	VAL	A	339	69.776	54.432	36.398	1.00	22.15	C
ATOM	1686	O	VAL	A	339	69.853	53.520	37.219	1.00	21.73	O
ATOM	1687	CB	VAL	A	339	71.015	54.174	34.214	1.00	21.11	C
ATOM	1688	CG1	VAL	A	339	72.079	53.494	35.099	1.00	20.90	C
ATOM	1689	CG2	VAL	A	339	70.936	53.465	32.855	1.00	20.61	C
ATOM	1690	N	ALA	A	340	69.821	55.712	36.749	1.00	21.99	N
ATOM	1691	CA	ALA	A	340	69.957	56.085	38.155	1.00	23.22	C

TABLE 3

ATOM	1692	C	ALA A 340	68.717	55.623	38.928	1.00	22.99	C
ATOM	1693	O	ALA A 340	68.818	55.112	40.048	1.00	23.73	O
ATOM	1694	CB	ALA A 340	70.140	57.599	38.283	1.00	23.33	C
ATOM	1695	N	GLU A 341	67.549	55.788	38.320	1.00	22.81	N
ATOM	1696	CA	GLU A 341	66.298	55.376	38.955	1.00	23.25	C
ATOM	1697	C	GLU A 341	66.234	53.851	39.047	1.00	22.89	C
ATOM	1698	O	GLU A 341	65.740	53.296	40.029	1.00	22.02	O
ATOM	1699	CB	GLU A 341	65.103	55.885	38.146	1.00	23.80	C
ATOM	1700	CG	GLU A 341	63.786	55.897	38.910	1.00	26.95	C
ATOM	1701	CD	GLU A 341	63.827	56.810	40.130	1.00	29.07	C
ATOM	1702	OE1	GLU A 341	64.433	57.902	40.052	1.00	30.17	O
ATOM	1703	OE2	GLU A 341	63.240	56.441	41.165	1.00	30.84	O
ATOM	1704	N	ARG A 342	66.736	53.179	38.014	1.00	22.30	N
ATOM	1705	CA	ARG A 342	66.737	51.722	37.979	1.00	22.47	C
ATOM	1706	C	ARG A 342	67.639	51.169	39.084	1.00	22.30	C
ATOM	1707	O	ARG A 342	67.303	50.182	39.732	1.00	22.02	O
ATOM	1708	CB	ARG A 342	67.205	51.233	36.598	1.00	22.21	C
ATOM	1709	CG	ARG A 342	67.165	49.717	36.393	1.00	21.30	C
ATOM	1710	CD	ARG A 342	68.428	49.027	36.910	1.00	21.14	C
ATOM	1711	NE	ARG A 342	69.657	49.497	36.266	1.00	21.04	N
ATOM	1712	CZ	ARG A 342	70.024	49.221	35.012	1.00	21.58	C
ATOM	1713	NH1	ARG A 342	69.260	48.468	34.227	1.00	20.91	N
ATOM	1714	NH2	ARG A 342	71.175	49.686	34.543	1.00	21.45	N
ATOM	1715	N	ASN A 343	68.780	51.813	39.304	1.00	22.59	N
ATOM	1716	CA	ASN A 343	69.697	51.356	40.343	1.00	23.77	C
ATOM	1717	C	ASN A 343	69.096	51.613	41.721	1.00	24.38	C
ATOM	1718	O	ASN A 343	69.274	50.816	42.643	1.00	23.51	O
ATOM	1719	CB	ASN A 343	71.060	52.046	40.201	1.00	23.94	C
ATOM	1720	CG	ASN A 343	71.798	51.608	38.948	1.00	24.43	C
ATOM	1721	OD1	ASN A 343	71.500	50.554	38.386	1.00	24.77	O
ATOM	1722	ND2	ASN A 343	72.775	52.404	38.513	1.00	24.50	N
ATOM	1723	N	LYS A 344	68.368	52.718	41.849	1.00	24.94	N
ATOM	1724	CA	LYS A 344	67.717	53.063	43.104	1.00	26.62	C
ATOM	1725	C	LYS A 344	66.626	52.029	43.368	1.00	26.38	C
ATOM	1726	O	LYS A 344	66.461	51.551	44.492	1.00	26.78	O
ATOM	1727	CB	LYS A 344	67.106	54.465	43.008	1.00	29.24	C
ATOM	1728	CG	LYS A 344	66.398	54.943	44.267	1.00	32.28	C
ATOM	1729	CD	LYS A 344	65.866	56.358	44.078	1.00	34.61	C
ATOM	1730	CE	LYS A 344	65.196	56.878	45.343	1.00	36.69	C
ATOM	1731	NZ	LYS A 344	66.161	57.002	46.475	1.00	38.80	N
ATOM	1732	N	TYR A 345	65.888	51.681	42.318	1.00	25.59	N
ATOM	1733	CA	TYR A 345	64.811	50.702	42.412	1.00	25.49	C
ATOM	1734	C	TYR A 345	65.366	49.339	42.841	1.00	25.79	C
ATOM	1735	O	TYR A 345	64.746	48.627	43.635	1.00	24.45	O
ATOM	1736	CB	TYR A 345	64.117	50.566	41.057	1.00	25.37	C
ATOM	1737	CG	TYR A 345	62.815	49.801	41.089	1.00	25.96	C
ATOM	1738	CD1	TYR A 345	61.626	50.427	41.460	1.00	26.32	C
ATOM	1739	CD2	TYR A 345	62.764	48.459	40.713	1.00	26.30	C
ATOM	1740	CE1	TYR A 345	60.415	49.738	41.446	1.00	27.08	C
ATOM	1741	CE2	TYR A 345	61.558	47.759	40.697	1.00	27.11	C
ATOM	1742	CZ	TYR A 345	60.391	48.406	41.061	1.00	27.19	C
ATOM	1743	OH	TYR A 345	59.195	47.735	41.008	1.00	28.86	O
ATOM	1744	N	PHE A 346	66.530	48.983	42.305	1.00	26.33	N
ATOM	1745	CA	PHE A 346	67.181	47.713	42.632	1.00	27.73	C
ATOM	1746	C	PHE A 346	67.537	47.684	44.118	1.00	28.91	C
ATOM	1747	O	PHE A 346	67.337	46.679	44.798	1.00	28.66	O
ATOM	1748	CB	PHE A 346	68.450	47.540	41.793	1.00	27.70	C

TABLE 3

ATOM	1749	CG	PHE	A	346	69.269	46.331	42.163	1.00	27.99	C
ATOM	1750	CD1	PHE	A	346	68.773	45.047	41.959	1.00	27.87	C
ATOM	1751	CD2	PHE	A	346	70.536	46.480	42.723	1.00	28.85	C
ATOM	1752	CE1	PHE	A	346	69.526	43.923	42.304	1.00	27.89	C
ATOM	1753	CE2	PHE	A	346	71.303	45.361	43.076	1.00	29.71	C
ATOM	1754	CZ	PHE	A	346	70.793	44.080	42.864	1.00	29.06	C
ATOM	1755	N	GLU	A	347	68.059	48.798	44.616	1.00	30.12	N
ATOM	1756	CA	GLU	A	347	68.430	48.897	46.021	1.00	32.28	C
ATOM	1757	C	GLU	A	347	67.227	48.820	46.958	1.00	31.98	C
ATOM	1758	O	GLU	A	347	67.329	48.280	48.056	1.00	31.99	O
ATOM	1759	CB	GLU	A	347	69.189	50.200	46.280	1.00	33.95	C
ATOM	1760	CG	GLU	A	347	70.645	50.150	45.853	1.00	38.56	C
ATOM	1761	CD	GLU	A	347	71.454	51.319	46.386	1.00	41.08	C
ATOM	1762	OE1	GLU	A	347	71.294	51.673	47.576	1.00	42.98	O
ATOM	1763	OE2	GLU	A	347	72.265	51.875	45.619	1.00	43.56	O
ATOM	1764	N	GLU	A	348	66.091	49.352	46.522	1.00	31.64	N
ATOM	1765	CA	GLU	A	348	64.888	49.347	47.348	1.00	31.87	C
ATOM	1766	C	GLU	A	348	64.124	48.031	47.330	1.00	30.98	C
ATOM	1767	O	GLU	A	348	63.576	47.617	48.350	1.00	31.10	O
ATOM	1768	CB	GLU	A	348	63.911	50.439	46.897	1.00	33.10	C
ATOM	1769	CG	GLU	A	348	64.506	51.812	46.664	1.00	35.32	C
ATOM	1770	CD	GLU	A	348	63.494	52.779	46.059	1.00	36.44	C
ATOM	1771	OE1	GLU	A	348	62.716	52.358	45.178	1.00	37.22	O
ATOM	1772	OE2	GLU	A	348	63.481	53.961	46.454	1.00	38.05	O
ATOM	1773	N	THR	A	349	64.079	47.381	46.171	1.00	29.37	N
ATOM	1774	CA	THR	A	349	63.316	46.147	46.016	1.00	28.42	C
ATOM	1775	C	THR	A	349	64.107	44.864	45.790	1.00	28.26	C
ATOM	1776	O	THR	A	349	63.563	43.775	45.928	1.00	28.54	O
ATOM	1777	CB	THR	A	349	62.347	46.267	44.829	1.00	28.53	C
ATOM	1778	OG1	THR	A	349	63.106	46.331	43.611	1.00	26.68	O
ATOM	1779	CG2	THR	A	349	61.489	47.525	44.956	1.00	27.99	C
ATOM	1780	N	GLY	A	350	65.375	44.982	45.423	1.00	27.91	N
ATOM	1781	CA	GLY	A	350	66.153	43.789	45.148	1.00	27.45	C
ATOM	1782	C	GLY	A	350	65.860	43.276	43.743	1.00	26.56	C
ATOM	1783	O	GLY	A	350	66.367	42.235	43.339	1.00	27.60	O
ATOM	1784	N	ILE	A	351	65.034	44.005	42.995	1.00	25.92	N
ATOM	1785	CA	ILE	A	351	64.687	43.614	41.625	1.00	24.44	C
ATOM	1786	C	ILE	A	351	65.530	44.395	40.619	1.00	23.82	C
ATOM	1787	O	ILE	A	351	65.557	45.627	40.649	1.00	22.61	O
ATOM	1788	CB	ILE	A	351	63.203	43.913	41.299	1.00	25.48	C
ATOM	1789	CG1	ILE	A	351	62.281	43.222	42.310	1.00	25.99	C
ATOM	1790	CG2	ILE	A	351	62.880	43.449	39.873	1.00	25.21	C
ATOM	1791	CD1	ILE	A	351	60.810	43.615	42.169	1.00	26.39	C
ATOM	1792	N	TYR	A	352	66.214	43.683	39.728	1.00	23.12	N
ATOM	1793	CA	TYR	A	352	67.024	44.339	38.708	1.00	22.28	C
ATOM	1794	C	TYR	A	352	66.274	44.290	37.389	1.00	22.46	C
ATOM	1795	O	TYR	A	352	66.033	43.210	36.845	1.00	21.68	O
ATOM	1796	CB	TYR	A	352	68.375	43.647	38.518	1.00	22.40	C
ATOM	1797	CG	TYR	A	352	69.269	44.375	37.526	1.00	22.27	C
ATOM	1798	CD1	TYR	A	352	70.058	45.451	37.932	1.00	22.07	C
ATOM	1799	CD2	TYR	A	352	69.296	44.012	36.176	1.00	22.89	C
ATOM	1800	CE1	TYR	A	352	70.852	46.151	37.028	1.00	22.81	C
ATOM	1801	CE2	TYR	A	352	70.094	44.714	35.252	1.00	22.60	C
ATOM	1802	CZ	TYR	A	352	70.868	45.779	35.691	1.00	22.45	C
ATOM	1803	OH	TYR	A	352	71.676	46.468	34.814	1.00	22.10	O
ATOM	1804	N	ILE	A	353	65.912	45.462	36.876	1.00	22.15	N
ATOM	1805	CA	ILE	A	353	65.196	45.556	35.610	1.00	22.13	C

TABLE 3

ATOM	1806	C	ILE A 353	66.119	46.052	34.495	1.00	21.86	C
ATOM	1807	O	ILE A 353	66.603	47.188	34.531	1.00	21.86	O
ATOM	1808	CB	ILE A 353	63.996	46.523	35.721	1.00	23.05	C
ATOM	1809	CG1	ILE A 353	63.036	46.030	36.817	1.00	23.41	C
ATOM	1810	CG2	ILE A 353	63.278	46.614	34.374	1.00	21.86	C
ATOM	1811	CD1	ILE A 353	61.863	46.936	37.063	1.00	24.85	C
ATOM	1812	N	PRO A 354	66.388	45.201	33.495	1.00	21.74	N
ATOM	1813	CA	PRO A 354	67.263	45.626	32.397	1.00	21.25	C
ATOM	1814	C	PRO A 354	66.608	46.780	31.649	1.00	21.17	C
ATOM	1815	O	PRO A 354	65.385	46.825	31.534	1.00	21.72	O
ATOM	1816	CB	PRO A 354	67.360	44.373	31.524	1.00	21.72	C
ATOM	1817	CG	PRO A 354	67.181	43.240	32.529	1.00	20.93	C
ATOM	1818	CD	PRO A 354	66.051	43.769	33.382	1.00	21.57	C
ATOM	1819	N	VAL A 355	67.406	47.722	31.159	1.00	20.15	N
ATOM	1820	CA	VAL A 355	66.841	48.829	30.396	1.00	19.73	C
ATOM	1821	C	VAL A 355	67.482	48.842	29.022	1.00	19.50	C
ATOM	1822	O	VAL A 355	68.629	48.430	28.851	1.00	19.88	O
ATOM	1823	CB	VAL A 355	67.032	50.206	31.094	1.00	18.66	C
ATOM	1824	CG1	VAL A 355	66.254	50.226	32.394	1.00	18.46	C
ATOM	1825	CG2	VAL A 355	68.514	50.497	31.333	1.00	18.65	C
ATOM	1826	N	CYS A 356	66.723	49.312	28.043	1.00	19.68	N
ATOM	1827	CA	CYS A 356	67.185	49.346	26.666	1.00	20.26	C
ATOM	1828	C	CYS A 356	67.273	50.761	26.110	1.00	20.70	C
ATOM	1829	O	CYS A 356	66.297	51.509	26.161	1.00	20.96	O
ATOM	1830	CB	CYS A 356	66.228	48.522	25.796	1.00	20.28	C
ATOM	1831	SG	CYS A 356	66.486	48.701	24.007	1.00	22.73	S
ATOM	1832	N	SER A 357	68.440	51.129	25.586	1.00	20.27	N
ATOM	1833	CA	SER A 357	68.597	52.447	24.981	1.00	20.16	C
ATOM	1834	C	SER A 357	68.088	52.277	23.553	1.00	20.30	C
ATOM	1835	O	SER A 357	68.713	51.599	22.734	1.00	19.54	O
ATOM	1836	CB	SER A 357	70.061	52.882	24.962	1.00	20.20	C
ATOM	1837	OG	SER A 357	70.163	54.193	24.432	1.00	20.16	O
ATOM	1838	N	ASP A 358	66.951	52.899	23.262	1.00	20.12	N
ATOM	1839	CA	ASP A 358	66.327	52.767	21.955	1.00	21.37	C
ATOM	1840	C	ASP A 358	66.441	54.009	21.070	1.00	21.92	C
ATOM	1841	O	ASP A 358	65.862	55.057	21.367	1.00	22.18	O
ATOM	1842	CB	ASP A 358	64.855	52.370	22.166	1.00	20.81	C
ATOM	1843	CG	ASP A 358	64.081	52.214	20.867	1.00	22.08	C
ATOM	1844	OD1	ASP A 358	64.703	52.059	19.791	1.00	21.34	O
ATOM	1845	OD2	ASP A 358	62.834	52.229	20.937	1.00	20.69	O
ATOM	1846	N	GLY A 359	67.204	53.875	19.986	1.00	22.92	N
ATOM	1847	CA	GLY A 359	67.381	54.964	19.040	1.00	23.74	C
ATOM	1848	C	GLY A 359	68.538	55.905	19.328	1.00	25.08	C
ATOM	1849	O	GLY A 359	69.078	55.928	20.431	1.00	24.78	O
ATOM	1850	N	GLY A 360	68.932	56.678	18.323	1.00	25.97	N
ATOM	1851	CA	GLY A 360	70.007	57.633	18.517	1.00	27.86	C
ATOM	1852	C	GLY A 360	71.419	57.132	18.287	1.00	28.88	C
ATOM	1853	O	GLY A 360	72.367	57.904	18.417	1.00	29.93	O
ATOM	1854	N	ILE A 361	71.581	55.855	17.961	1.00	29.68	N
ATOM	1855	CA	ILE A 361	72.918	55.329	17.706	1.00	30.57	C
ATOM	1856	C	ILE A 361	73.309	55.719	16.282	1.00	31.81	C
ATOM	1857	O	ILE A 361	72.765	55.196	15.310	1.00	31.75	O
ATOM	1858	CB	ILE A 361	72.971	53.789	17.838	1.00	30.18	C
ATOM	1859	CG1	ILE A 361	72.603	53.368	19.266	1.00	29.88	C
ATOM	1860	CG2	ILE A 361	74.366	53.282	17.481	1.00	30.01	C
ATOM	1861	CD1	ILE A 361	73.605	53.792	20.328	1.00	28.84	C
ATOM	1862	N	VAL A 362	74.249	56.648	16.167	1.00	32.99	N

TABLE 3

ATOM	1863	CA	VAL	A	362	74.699	57.110	14.862	1.00	33.95	C
ATOM	1864	C	VAL	A	362	76.028	56.463	14.483	1.00	34.24	C
ATOM	1865	O	VAL	A	362	76.203	56.015	13.351	1.00	35.04	O
ATOM	1866	CB	VAL	A	362	74.851	58.646	14.854	1.00	34.42	C
ATOM	1867	CG1	VAL	A	362	75.233	59.131	13.462	1.00	34.82	C
ATOM	1868	CG2	VAL	A	362	73.555	59.292	15.304	1.00	34.82	C
ATOM	1869	N	TYR	A	363	76.953	56.404	15.438	1.00	33.91	N
ATOM	1870	CA	TYR	A	363	78.271	55.813	15.210	1.00	33.19	C
ATOM	1871	C	TYR	A	363	78.507	54.649	16.163	1.00	31.86	C
ATOM	1872	O	TYR	A	363	77.862	54.561	17.207	1.00	31.05	O
ATOM	1873	CB	TYR	A	363	79.350	56.877	15.411	1.00	34.45	C
ATOM	1874	CG	TYR	A	363	79.142	58.094	14.544	1.00	36.04	C
ATOM	1875	CD1	TYR	A	363	79.242	58.008	13.154	1.00	37.00	C
ATOM	1876	CD2	TYR	A	363	78.796	59.323	15.105	1.00	36.77	C
ATOM	1877	CE1	TYR	A	363	78.998	59.114	12.344	1.00	38.19	C
ATOM	1878	CE2	TYR	A	363	78.548	60.435	14.304	1.00	37.90	C
ATOM	1879	CZ	TYR	A	363	78.649	60.323	12.926	1.00	38.55	C
ATOM	1880	OH	TYR	A	363	78.390	61.415	12.130	1.00	40.47	O
ATOM	1881	N	ASP	A	364	79.432	53.760	15.813	1.00	30.55	N
ATOM	1882	CA	ASP	A	364	79.717	52.610	16.668	1.00	29.67	C
ATOM	1883	C	ASP	A	364	80.055	52.987	18.108	1.00	28.54	C
ATOM	1884	O	ASP	A	364	79.621	52.316	19.043	1.00	28.30	O
ATOM	1885	CB	ASP	A	364	80.871	51.772	16.109	1.00	30.75	C
ATOM	1886	CG	ASP	A	364	80.511	51.052	14.819	1.00	31.62	C
ATOM	1887	OD1	ASP	A	364	79.346	50.634	14.647	1.00	31.07	O
ATOM	1888	OD2	ASP	A	364	81.413	50.887	13.981	1.00	33.54	O
ATOM	1889	N	TYR	A	365	80.828	54.054	18.293	1.00	26.82	N
ATOM	1890	CA	TYR	A	365	81.214	54.449	19.642	1.00	26.01	C
ATOM	1891	C	TYR	A	365	80.021	54.874	20.499	1.00	25.10	C
ATOM	1892	O	TYR	A	365	80.117	54.925	21.723	1.00	24.73	O
ATOM	1893	CB	TYR	A	365	82.295	55.541	19.588	1.00	25.94	C
ATOM	1894	CG	TYR	A	365	81.804	56.962	19.451	1.00	26.33	C
ATOM	1895	CD1	TYR	A	365	81.582	57.751	20.578	1.00	25.79	C
ATOM	1896	CD2	TYR	A	365	81.624	57.542	18.193	1.00	26.48	C
ATOM	1897	CE1	TYR	A	365	81.203	59.086	20.459	1.00	27.08	C
ATOM	1898	CE2	TYR	A	365	81.242	58.876	18.063	1.00	27.27	C
ATOM	1899	CZ	TYR	A	365	81.036	59.640	19.198	1.00	27.74	C
ATOM	1900	OH	TYR	A	365	80.675	60.962	19.074	1.00	29.07	O
ATOM	1901	N	HIS	A	366	78.892	55.164	19.858	1.00	24.53	N
ATOM	1902	CA	HIS	A	366	77.685	55.534	20.591	1.00	24.28	C
ATOM	1903	C	HIS	A	366	77.190	54.300	21.339	1.00	23.77	C
ATOM	1904	O	HIS	A	366	76.569	54.411	22.399	1.00	23.59	O
ATOM	1905	CB	HIS	A	366	76.589	56.017	19.641	1.00	24.35	C
ATOM	1906	CG	HIS	A	366	76.799	57.409	19.134	1.00	25.11	C
ATOM	1907	ND1	HIS	A	366	77.870	58.187	19.517	1.00	25.78	N
ATOM	1908	CD2	HIS	A	366	76.059	58.173	18.295	1.00	25.31	C
ATOM	1909	CE1	HIS	A	366	77.779	59.372	18.938	1.00	25.96	C
ATOM	1910	NE2	HIS	A	366	76.690	59.389	18.191	1.00	25.85	N
ATOM	1911	N	MET	A	367	77.463	53.129	20.773	1.00	23.23	N
ATOM	1912	CA	MET	A	367	77.062	51.863	21.388	1.00	23.44	C
ATOM	1913	C	MET	A	367	77.785	51.715	22.721	1.00	22.42	C
ATOM	1914	O	MET	A	367	77.180	51.385	23.735	1.00	21.74	O
ATOM	1915	CB	MET	A	367	77.437	50.672	20.494	1.00	23.55	C
ATOM	1916	CG	MET	A	367	76.680	50.582	19.169	1.00	25.18	C
ATOM	1917	SD	MET	A	367	77.253	49.158	18.204	1.00	26.50	S
ATOM	1918	CE	MET	A	367	76.270	49.323	16.707	1.00	25.76	C
ATOM	1919	N	THR	A	368	79.093	51.941	22.698	1.00	22.22	N

TABLE 3

ATOM	1920	CA	THR A 368	79.915	51.835	23.898	1.00	22.15	C
ATOM	1921	C	THR A 368	79.445	52.838	24.952	1.00	21.97	C
ATOM	1922	O	THR A 368	79.380	52.517	26.137	1.00	22.10	O
ATOM	1923	CB	THR A 368	81.392	52.097	23.560	1.00	22.55	C
ATOM	1924	OG1	THR A 368	81.735	51.369	22.373	1.00	22.22	O
ATOM	1925	CG2	THR A 368	82.294	51.645	24.702	1.00	21.82	C
ATOM	1926	N	LEU A 369	79.117	54.052	24.517	1.00	21.48	N
ATOM	1927	CA	LEU A 369	78.640	55.087	25.431	1.00	21.65	C
ATOM	1928	C	LEU A 369	77.318	54.693	26.096	1.00	21.14	C
ATOM	1929	O	LEU A 369	77.163	54.833	27.306	1.00	20.89	O
ATOM	1930	CB	LEU A 369	78.446	56.416	24.689	1.00	22.45	C
ATOM	1931	CG	LEU A 369	79.697	57.209	24.300	1.00	24.02	C
ATOM	1932	CD1	LEU A 369	79.301	58.381	23.400	1.00	23.76	C
ATOM	1933	CD2	LEU A 369	80.397	57.710	25.567	1.00	23.98	C
ATOM	1934	N	ALA A 370	76.371	54.211	25.296	1.00	20.39	N
ATOM	1935	CA	ALA A 370	75.065	53.806	25.810	1.00	20.84	C
ATOM	1936	C	ALA A 370	75.242	52.732	26.877	1.00	20.22	C
ATOM	1937	O	ALA A 370	74.635	52.793	27.945	1.00	20.03	O
ATOM	1938	CB	ALA A 370	74.194	53.279	24.675	1.00	20.37	C
ATOM	1939	N	LEU A 371	76.078	51.748	26.576	1.00	20.36	N
ATOM	1940	CA	LEU A 371	76.343	50.669	27.516	1.00	20.12	C
ATOM	1941	C	LEU A 371	77.032	51.209	28.773	1.00	20.41	C
ATOM	1942	O	LEU A 371	76.656	50.853	29.887	1.00	19.69	O
ATOM	1943	CB	LEU A 371	77.222	49.602	26.854	1.00	19.81	C
ATOM	1944	CG	LEU A 371	76.580	48.882	25.656	1.00	20.61	C
ATOM	1945	CD1	LEU A 371	77.592	47.954	24.999	1.00	21.12	C
ATOM	1946	CD2	LEU A 371	75.364	48.092	26.127	1.00	20.77	C
ATOM	1947	N	ALA A 372	78.036	52.064	28.588	1.00	20.08	N
ATOM	1948	CA	ALA A 372	78.772	52.640	29.712	1.00	20.58	C
ATOM	1949	C	ALA A 372	77.868	53.444	30.641	1.00	21.51	C
ATOM	1950	O	ALA A 372	78.064	53.450	31.858	1.00	21.21	O
ATOM	1951	CB	ALA A 372	79.909	53.525	29.199	1.00	20.25	C
ATOM	1952	N	MET A 373	76.883	54.126	30.065	1.00	21.00	N
ATOM	1953	CA	MET A 373	75.947	54.923	30.852	1.00	21.56	C
ATOM	1954	C	MET A 373	74.960	54.065	31.641	1.00	21.75	C
ATOM	1955	O	MET A 373	74.187	54.588	32.449	1.00	21.78	O
ATOM	1956	CB	MET A 373	75.192	55.892	29.944	1.00	21.91	C
ATOM	1957	CG	MET A 373	76.082	56.987	29.370	1.00	22.56	C
ATOM	1958	SD	MET A 373	75.243	57.985	28.132	1.00	24.61	S
ATOM	1959	CE	MET A 373	76.595	59.086	27.591	1.00	23.75	C
ATOM	1960	N	GLY A 374	74.970	52.754	31.405	1.00	21.29	N
ATOM	1961	CA	GLY A 374	74.078	51.884	32.157	1.00	20.54	C
ATOM	1962	C	GLY A 374	73.062	51.058	31.390	1.00	20.55	C
ATOM	1963	O	GLY A 374	72.444	50.164	31.961	1.00	20.60	O
ATOM	1964	N	ALA A 375	72.864	51.345	30.108	1.00	20.21	N
ATOM	1965	CA	ALA A 375	71.910	50.562	29.332	1.00	20.36	C
ATOM	1966	C	ALA A 375	72.448	49.140	29.228	1.00	20.12	C
ATOM	1967	O	ALA A 375	73.644	48.943	29.011	1.00	19.79	O
ATOM	1968	CB	ALA A 375	71.731	51.166	27.932	1.00	20.49	C
ATOM	1969	N	ASP A 376	71.573	48.151	29.399	1.00	20.05	N
ATOM	1970	CA	ASP A 376	71.976	46.744	29.308	1.00	20.54	C
ATOM	1971	C	ASP A 376	72.074	46.303	27.854	1.00	20.62	C
ATOM	1972	O	ASP A 376	72.933	45.498	27.491	1.00	20.67	O
ATOM	1973	CB	ASP A 376	70.978	45.874	30.069	1.00	20.75	C
ATOM	1974	CG	ASP A 376	70.900	46.253	31.530	1.00	21.21	C
ATOM	1975	OD1	ASP A 376	71.732	45.757	32.319	1.00	21.97	O
ATOM	1976	OD2	ASP A 376	70.027	47.073	31.882	1.00	21.23	O

ATOM	1977	N	PHE A 377	71.173	46.813	27.022	1.00	21.26	N
ATOM	1978	CA	PHE A 377	71.220	46.501	25.604	1.00	21.16	C
ATOM	1979	C	PHE A 377	70.726	47.683	24.788	1.00	21.44	C
ATOM	1980	O	PHE A 377	70.186	48.647	25.336	1.00	21.24	O
ATOM	1981	CB	PHE A 377	70.467	45.204	25.252	1.00	21.17	C
ATOM	1982	CG	PHE A 377	69.056	45.135	25.758	1.00	22.60	C
ATOM	1983	CD1	PHE A 377	68.791	44.771	27.077	1.00	23.03	C
ATOM	1984	CD2	PHE A 377	67.987	45.371	24.900	1.00	21.57	C
ATOM	1985	CE1	PHE A 377	67.478	44.638	27.531	1.00	22.95	C
ATOM	1986	CE2	PHE A 377	66.669	45.240	25.345	1.00	22.51	C
ATOM	1987	CZ	PHE A 377	66.416	44.872	26.663	1.00	22.95	C
ATOM	1988	N	ILE A 378	70.931	47.600	23.480	1.00	20.98	N
ATOM	1989	CA	ILE A 378	70.607	48.683	22.567	1.00	21.02	C
ATOM	1990	C	ILE A 378	69.669	48.272	21.439	1.00	20.93	C
ATOM	1991	O	ILE A 378	69.847	47.222	20.833	1.00	20.57	O
ATOM	1992	CB	ILE A 378	71.923	49.220	21.936	1.00	21.28	C
ATOM	1993	CG1	ILE A 378	72.914	49.588	23.046	1.00	21.93	C
ATOM	1994	CG2	ILE A 378	71.643	50.439	21.056	1.00	21.62	C
ATOM	1995	CD1	ILE A 378	74.341	49.772	22.558	1.00	22.57	C
ATOM	1996	N	MET A 379	68.669	49.105	21.166	1.00	20.84	N
ATOM	1997	CA	MET A 379	67.743	48.831	20.073	1.00	21.55	C
ATOM	1998	C	MET A 379	68.084	49.794	18.941	1.00	21.65	C
ATOM	1999	O	MET A 379	68.230	50.998	19.164	1.00	21.66	O
ATOM	2000	CB	MET A 379	66.284	49.028	20.503	1.00	21.25	C
ATOM	2001	CG	MET A 379	65.303	48.766	19.356	1.00	21.22	C
ATOM	2002	SD	MET A 379	63.576	48.745	19.833	1.00	22.14	S
ATOM	2003	CE	MET A 379	63.437	47.038	20.433	1.00	22.39	C
ATOM	2004	N	LEU A 380	68.226	49.262	17.731	1.00	22.48	N
ATOM	2005	CA	LEU A 380	68.575	50.092	16.584	1.00	22.61	C
ATOM	2006	C	LEU A 380	67.703	49.788	15.373	1.00	22.97	C
ATOM	2007	O	LEU A 380	67.342	48.634	15.128	1.00	22.62	O
ATOM	2008	CB	LEU A 380	70.041	49.875	16.192	1.00	23.11	C
ATOM	2009	CG	LEU A 380	71.131	49.897	17.270	1.00	23.70	C
ATOM	2010	CD1	LEU A 380	71.193	48.542	17.966	1.00	23.80	C
ATOM	2011	CD2	LEU A 380	72.476	50.200	16.625	1.00	23.63	C
ATOM	2012	N	GLY A 381	67.382	50.830	14.614	1.00	22.74	N
ATOM	2013	CA	GLY A 381	66.576	50.655	13.419	1.00	24.26	C
ATOM	2014	C	GLY A 381	67.414	50.872	12.172	1.00	24.94	C
ATOM	2015	O	GLY A 381	67.648	49.946	11.397	1.00	25.50	O
ATOM	2016	N	ARG A 382	67.882	52.103	11.992	1.00	26.09	N
ATOM	2017	CA	ARG A 382	68.694	52.477	10.836	1.00	27.52	C
ATOM	2018	C	ARG A 382	69.891	51.551	10.630	1.00	27.04	C
ATOM	2019	O	ARG A 382	70.180	51.130	9.507	1.00	26.49	O
ATOM	2020	CB	ARG A 382	69.199	53.911	10.998	1.00	29.77	C
ATOM	2021	CG	ARG A 382	69.830	54.488	9.737	1.00	34.03	C
ATOM	2022	CD	ARG A 382	70.702	55.699	10.034	1.00	37.28	C
ATOM	2023	NE	ARG A 382	72.102	55.327	10.247	1.00	41.27	N
ATOM	2024	CZ	ARG A 382	72.554	54.651	11.300	1.00	42.49	C
ATOM	2025	NH1	ARG A 382	71.723	54.267	12.255	1.00	44.24	N
ATOM	2026	NH2	ARG A 382	73.842	54.354	11.396	1.00	44.03	N
ATOM	2027	N	TYR A 383	70.589	51.248	11.721	1.00	26.34	N
ATOM	2028	CA	TYR A 383	71.763	50.380	11.679	1.00	25.33	C
ATOM	2029	C	TYR A 383	71.493	49.062	10.948	1.00	24.88	C
ATOM	2030	O	TYR A 383	72.280	48.639	10.096	1.00	24.77	O
ATOM	2031	CB	TYR A 383	72.233	50.075	13.105	1.00	24.87	C
ATOM	2032	CG	TYR A 383	73.466	49.203	13.179	1.00	24.53	C
ATOM	2033	CD1	TYR A 383	74.742	49.754	13.066	1.00	24.66	C



TABLE 3

ATOM	2034	CD2	TYR	A	383	73.356	47.823	13.354	1.00	24.92	C
ATOM	2035	CE1	TYR	A	383	75.882	48.952	13.126	1.00	24.58	C
ATOM	2036	CE2	TYR	A	383	74.491	47.008	13.413	1.00	24.77	C
ATOM	2037	CZ	TYR	A	383	75.748	47.581	13.299	1.00	25.09	C
ATOM	2038	OH	TYR	A	383	76.867	46.782	13.350	1.00	24.41	O
ATOM	2039	N	PHE	A	384	70.383	48.416	11.291	1.00	24.06	N
ATOM	2040	CA	PHE	A	384	70.015	47.136	10.694	1.00	23.93	C
ATOM	2041	C	PHE	A	384	69.289	47.263	9.357	1.00	24.44	C
ATOM	2042	O	PHE	A	384	69.320	46.338	8.542	1.00	24.13	O
ATOM	2043	CB	PHE	A	384	69.139	46.334	11.663	1.00	23.18	C
ATOM	2044	CG	PHE	A	384	69.869	45.847	12.889	1.00	22.86	C
ATOM	2045	CD1	PHE	A	384	70.813	44.828	12.795	1.00	22.67	C
ATOM	2046	CD2	PHE	A	384	69.606	46.407	14.139	1.00	22.33	C
ATOM	2047	CE1	PHE	A	384	71.487	44.369	13.929	1.00	22.64	C
ATOM	2048	CE2	PHE	A	384	70.272	45.958	15.281	1.00	21.84	C
ATOM	2049	CZ	PHE	A	384	71.216	44.936	15.176	1.00	22.26	C
ATOM	2050	N	ALA	A	385	68.629	48.395	9.138	1.00	24.36	N
ATOM	2051	CA	ALA	A	385	67.904	48.612	7.889	1.00	26.01	C
ATOM	2052	C	ALA	A	385	68.839	48.544	6.679	1.00	26.76	C
ATOM	2053	O	ALA	A	385	68.424	48.166	5.588	1.00	27.26	O
ATOM	2054	CB	ALA	A	385	67.193	49.964	7.927	1.00	25.65	C
ATOM	2055	N	ARG	A	386	70.102	48.908	6.891	1.00	28.04	N
ATOM	2056	CA	ARG	A	386	71.119	48.915	5.837	1.00	28.74	C
ATOM	2057	C	ARG	A	386	71.531	47.529	5.344	1.00	28.88	C
ATOM	2058	O	ARG	A	386	72.116	47.401	4.267	1.00	29.00	O
ATOM	2059	CB	ARG	A	386	72.390	49.612	6.331	1.00	29.46	C
ATOM	2060	CG	ARG	A	386	72.241	51.044	6.813	1.00	31.77	C
ATOM	2061	CD	ARG	A	386	73.547	51.470	7.482	1.00	32.99	C
ATOM	2062	NE	ARG	A	386	73.922	50.500	8.508	1.00	34.12	N
ATOM	2063	CZ	ARG	A	386	75.170	50.218	8.871	1.00	34.01	C
ATOM	2064	NH1	ARG	A	386	76.197	50.830	8.294	1.00	33.31	N
ATOM	2065	NH2	ARG	A	386	75.388	49.313	9.813	1.00	34.05	N
ATOM	2066	N	PHE	A	387	71.239	46.495	6.127	1.00	28.95	N
ATOM	2067	CA	PHE	A	387	71.649	45.146	5.763	1.00	28.84	C
ATOM	2068	C	PHE	A	387	70.775	44.388	4.777	1.00	29.75	C
ATOM	2069	O	PHE	A	387	69.581	44.642	4.641	1.00	29.59	O
ATOM	2070	CB	PHE	A	387	71.833	44.289	7.021	1.00	28.17	C
ATOM	2071	CG	PHE	A	387	72.742	44.904	8.050	1.00	28.00	C
ATOM	2072	CD1	PHE	A	387	73.851	45.655	7.663	1.00	27.77	C
ATOM	2073	CD2	PHE	A	387	72.499	44.723	9.408	1.00	27.53	C
ATOM	2074	CE1	PHE	A	387	74.703	46.218	8.617	1.00	27.95	C
ATOM	2075	CE2	PHE	A	387	73.346	45.282	10.370	1.00	26.97	C
ATOM	2076	CZ	PHE	A	387	74.445	46.029	9.976	1.00	27.00	C
ATOM	2077	N	GLU	A	388	71.412	43.441	4.100	1.00	30.90	N
ATOM	2078	CA	GLU	A	388	70.773	42.585	3.112	1.00	32.08	C
ATOM	2079	C	GLU	A	388	69.544	41.898	3.691	1.00	31.92	C
ATOM	2080	O	GLU	A	388	68.539	41.713	3.001	1.00	31.55	O
ATOM	2081	CB	GLU	A	388	71.778	41.529	2.647	1.00	33.36	C
ATOM	2082	CG	GLU	A	388	71.235	40.528	1.647	1.00	37.10	C
ATOM	2083	CD	GLU	A	388	70.777	41.189	0.367	1.00	38.82	C
ATOM	2084	OE1	GLU	A	388	71.594	41.898	-0.258	1.00	40.61	O
ATOM	2085	OE2	GLU	A	388	69.604	41.000	-0.015	1.00	41.01	O
ATOM	2086	N	GLU	A	389	69.626	41.532	4.967	1.00	31.81	N
ATOM	2087	CA	GLU	A	389	68.534	40.837	5.633	1.00	31.88	C
ATOM	2088	C	GLU	A	389	67.315	41.667	6.027	1.00	31.91	C
ATOM	2089	O	GLU	A	389	66.307	41.103	6.442	1.00	31.96	O
ATOM	2090	CB	GLU	A	389	69.064	40.090	6.863	1.00	31.96	C

ATOM	2091	CG	GLU	A	389	70.092	39.016	6.523	1.00	31.96	C
ATOM	2092	CD	GLU	A	389	71.527	39.515	6.568	1.00	31.52	C
ATOM	2093	OE1	GLU	A	389	71.764	40.735	6.447	1.00	32.44	O
ATOM	2094	OE2	GLU	A	389	72.431	38.676	6.715	1.00	32.19	O
ATOM	2095	N	SER	A	390	67.385	42.991	5.920	1.00	32.24	N
ATOM	2096	CA	SER	A	390	66.215	43.792	6.270	1.00	33.25	C
ATOM	2097	C	SER	A	390	65.147	43.453	5.218	1.00	34.01	C
ATOM	2098	O	SER	A	390	65.474	43.169	4.064	1.00	33.38	O
ATOM	2099	CB	SER	A	390	66.544	45.290	6.264	1.00	33.16	C
ATOM	2100	OG	SER	A	390	66.764	45.776	4.954	1.00	34.84	O
ATOM	2101	N	PRO	A	391	63.860	43.484	5.604	1.00	34.79	N
ATOM	2102	CA	PRO	A	391	62.737	43.165	4.713	1.00	35.94	C
ATOM	2103	C	PRO	A	391	62.322	44.209	3.681	1.00	37.25	C
ATOM	2104	O	PRO	A	391	61.208	44.153	3.167	1.00	38.09	O
ATOM	2105	CB	PRO	A	391	61.611	42.883	5.697	1.00	35.46	C
ATOM	2106	CG	PRO	A	391	61.850	43.944	6.725	1.00	34.53	C
ATOM	2107	CD	PRO	A	391	63.363	43.892	6.933	1.00	34.40	C
ATOM	2108	N	THR	A	392	63.196	45.157	3.373	1.00	38.30	N
ATOM	2109	CA	THR	A	392	62.849	46.185	2.403	1.00	39.78	C
ATOM	2110	C	THR	A	392	63.551	45.958	1.072	1.00	41.04	C
ATOM	2111	O	THR	A	392	64.460	45.131	0.969	1.00	40.81	O
ATOM	2112	CB	THR	A	392	63.210	47.581	2.920	1.00	39.64	C
ATOM	2113	OG1	THR	A	392	64.629	47.674	3.085	1.00	40.34	O
ATOM	2114	CG2	THR	A	392	62.528	47.844	4.259	1.00	39.79	C
ATOM	2115	N	ARG	A	393	63.122	46.697	0.055	1.00	42.49	N
ATOM	2116	CA	ARG	A	393	63.707	46.566	-1.271	1.00	44.24	C
ATOM	2117	C	ARG	A	393	65.072	47.214	-1.372	1.00	44.65	C
ATOM	2118	O	ARG	A	393	65.306	48.298	-0.834	1.00	44.87	O
ATOM	2119	CB	ARG	A	393	62.806	47.196	-2.337	1.00	45.06	C
ATOM	2120	CG	ARG	A	393	61.425	46.587	-2.464	1.00	46.87	C
ATOM	2121	CD	ARG	A	393	60.966	46.622	-3.919	1.00	48.41	C
ATOM	2122	NE	ARG	A	393	61.374	47.850	-4.597	1.00	49.42	N
ATOM	2123	CZ	ARG	A	393	60.971	49.068	-4.253	1.00	49.97	C
ATOM	2124	NH1	ARG	A	393	60.138	49.231	-3.233	1.00	50.58	N
ATOM	2125	NH2	ARG	A	393	61.410	50.125	-4.925	1.00	50.50	N
ATOM	2126	N	LYS	A	394	65.973	46.535	-2.069	1.00	45.28	N
ATOM	2127	CA	LYS	A	394	67.309	47.056	-2.296	1.00	46.21	C
ATOM	2128	C	LYS	A	394	67.171	47.833	-3.598	1.00	46.79	C
ATOM	2129	O	LYS	A	394	66.911	47.242	-4.645	1.00	47.04	O
ATOM	2130	CB	LYS	A	394	68.304	45.913	-2.478	1.00	45.89	C
ATOM	2131	CG	LYS	A	394	69.744	46.366	-2.558	1.00	46.14	C
ATOM	2132	CD	LYS	A	394	70.649	45.254	-3.055	1.00	46.46	C
ATOM	2133	CE	LYS	A	394	70.618	44.049	-2.140	1.00	46.54	C
ATOM	2134	NZ	LYS	A	394	71.498	42.968	-2.658	1.00	46.60	N
ATOM	2135	N	VAL	A	395	67.316	49.151	-3.533	1.00	47.31	N
ATOM	2136	CA	VAL	A	395	67.183	49.977	-4.726	1.00	48.01	C
ATOM	2137	C	VAL	A	395	68.489	50.671	-5.078	1.00	48.58	C
ATOM	2138	O	VAL	A	395	69.209	51.136	-4.197	1.00	48.67	O
ATOM	2139	CB	VAL	A	395	66.086	51.049	-4.543	1.00	48.06	C
ATOM	2140	CG1	VAL	A	395	64.757	50.379	-4.223	1.00	48.03	C
ATOM	2141	CG2	VAL	A	395	66.473	52.014	-3.435	1.00	47.99	C
ATOM	2142	N	THR	A	396	68.792	50.736	-6.370	1.00	49.08	N
ATOM	2143	CA	THR	A	396	70.014	51.380	-6.831	1.00	49.73	C
ATOM	2144	C	THR	A	396	69.691	52.708	-7.493	1.00	50.27	C
ATOM	2145	O	THR	A	396	69.007	52.759	-8.516	1.00	50.30	O
ATOM	2146	CB	THR	A	396	70.770	50.497	-7.835	1.00	49.70	C
ATOM	2147	OG1	THR	A	396	71.053	49.228	-7.234	1.00	49.67	O

TABLE 3

ATOM	2148	CG2	THR	A	396	72.080	51.159	-8.240	1.00	49.85	C
ATOM	2149	N	ILE	A	397	70.192	53.784	-6.899	1.00	50.84	N
ATOM	2150	CA	ILE	A	397	69.953	55.122	-7.416	1.00	51.13	C
ATOM	2151	C	ILE	A	397	71.261	55.795	-7.821	1.00	51.21	C
ATOM	2152	O	ILE	A	397	72.043	56.214	-6.967	1.00	51.47	O
ATOM	2153	CB	ILE	A	397	69.260	56.001	-6.358	1.00	51.32	C
ATOM	2154	CG1	ILE	A	397	68.033	55.276	-5.800	1.00	51.51	C
ATOM	2155	CG2	ILE	A	397	68.855	57.333	-6.977	1.00	51.27	C
ATOM	2156	CD1	ILE	A	397	67.325	56.029	-4.691	1.00	51.49	C
ATOM	2157	N	ASN	A	398	71.497	55.889	-9.126	1.00	51.17	N
ATOM	2158	CA	ASN	A	398	72.702	56.528	-9.644	1.00	50.97	C
ATOM	2159	C	ASN	A	398	73.987	55.852	-9.174	1.00	50.29	C
ATOM	2160	O	ASN	A	398	74.930	56.525	-8.758	1.00	50.58	O
ATOM	2161	CB	ASN	A	398	72.730	58.000	-9.228	1.00	51.92	C
ATOM	2162	CG	ASN	A	398	71.476	58.742	-9.635	1.00	52.91	C
ATOM	2163	OD1	ASN	A	398	71.150	58.827	-10.819	1.00	53.63	O
ATOM	2164	ND2	ASN	A	398	70.761	59.284	-8.654	1.00	53.34	N
ATOM	2165	N	GLY	A	399	74.021	54.526	-9.238	1.00	49.43	N
ATOM	2166	CA	GLY	A	399	75.209	53.801	-8.824	1.00	48.10	C
ATOM	2167	C	GLY	A	399	75.308	53.532	-7.334	1.00	47.22	C
ATOM	2168	O	GLY	A	399	76.228	52.844	-6.887	1.00	47.45	O
ATOM	2169	N	SER	A	400	74.374	54.073	-6.559	1.00	45.83	N
ATOM	2170	CA	SER	A	400	74.387	53.864	-5.115	1.00	44.44	C
ATOM	2171	C	SER	A	400	73.287	52.916	-4.674	1.00	43.04	C
ATOM	2172	O	SER	A	400	72.100	53.221	-4.793	1.00	42.88	O
ATOM	2173	CB	SER	A	400	74.243	55.195	-4.373	1.00	44.67	C
ATOM	2174	OG	SER	A	400	75.455	55.926	-4.407	1.00	45.51	O
ATOM	2175	N	VAL	A	401	73.692	51.757	-4.167	1.00	41.55	N
ATOM	2176	CA	VAL	A	401	72.739	50.768	-3.697	1.00	40.15	C
ATOM	2177	C	VAL	A	401	72.251	51.225	-2.328	1.00	39.84	C
ATOM	2178	O	VAL	A	401	73.046	51.445	-1.413	1.00	39.36	O
ATOM	2179	CB	VAL	A	401	73.395	49.375	-3.599	1.00	39.80	C
ATOM	2180	CG1	VAL	A	401	72.386	48.348	-3.117	1.00	38.64	C
ATOM	2181	CG2	VAL	A	401	73.944	48.971	-4.966	1.00	39.24	C
ATOM	2182	N	MET	A	402	70.938	51.387	-2.206	1.00	39.55	N
ATOM	2183	CA	MET	A	402	70.329	51.837	-0.961	1.00	39.09	C
ATOM	2184	C	MET	A	402	69.240	50.864	-0.539	1.00	38.02	C
ATOM	2185	O	MET	A	402	68.872	49.962	-1.289	1.00	37.68	O
ATOM	2186	CB	MET	A	402	69.683	53.213	-1.148	1.00	40.51	C
ATOM	2187	CG	MET	A	402	70.529	54.244	-1.882	1.00	42.23	C
ATOM	2188	SD	MET	A	402	71.952	54.787	-0.942	1.00	45.56	S
ATOM	2189	CE	MET	A	402	71.204	56.039	0.120	1.00	43.68	C
ATOM	2190	N	LYS	A	403	68.734	51.059	0.673	1.00	36.46	N
ATOM	2191	CA	LYS	A	403	67.649	50.250	1.199	1.00	35.41	C
ATOM	2192	C	LYS	A	403	66.641	51.227	1.785	1.00	34.75	C
ATOM	2193	O	LYS	A	403	67.016	52.298	2.265	1.00	34.48	O
ATOM	2194	CB	LYS	A	403	68.153	49.275	2.266	1.00	35.62	C
ATOM	2195	CG	LYS	A	403	69.086	48.205	1.710	1.00	35.12	C
ATOM	2196	CD	LYS	A	403	68.847	46.848	2.346	1.00	35.57	C
ATOM	2197	CE	LYS	A	403	67.466	46.315	2.009	1.00	35.05	C
ATOM	2198	NZ	LYS	A	403	67.242	44.936	2.521	1.00	33.99	N
ATOM	2199	N	GLU	A	404	65.364	50.869	1.727	1.00	34.23	N
ATOM	2200	CA	GLU	A	404	64.305	51.734	2.235	1.00	34.40	C
ATOM	2201	C	GLU	A	404	64.259	51.735	3.754	1.00	33.56	C
ATOM	2202	O	GLU	A	404	64.590	50.740	4.394	1.00	33.40	O
ATOM	2203	CB	GLU	A	404	62.947	51.268	1.718	1.00	35.68	C
ATOM	2204	CG	GLU	A	404	62.879	51.034	0.225	1.00	38.04	C

ATOM	2205	CD	GLU	A	404	61.547	50.453	-0.193	1.00	39.70	C
ATOM	2206	OE1	GLU	A	404	61.264	49.284	0.159	1.00	40.89	O
ATOM	2207	OE2	GLU	A	404	60.778	51.171	-0.864	1.00	40.74	O
ATOM	2208	N	TYR	A	405	63.833	52.855	4.325	1.00	32.74	N
ATOM	2209	CA	TYR	A	405	63.714	52.975	5.770	1.00	32.04	C
ATOM	2210	C	TYR	A	405	62.665	54.027	6.092	1.00	31.67	C
ATOM	2211	O	TYR	A	405	62.782	55.179	5.677	1.00	32.05	O
ATOM	2212	CB	TYR	A	405	65.059	53.365	6.392	1.00	31.13	C
ATOM	2213	CG	TYR	A	405	65.049	53.387	7.905	1.00	30.72	C
ATOM	2214	CD1	TYR	A	405	64.643	52.269	8.636	1.00	29.79	C
ATOM	2215	CD2	TYR	A	405	65.451	54.523	8.607	1.00	29.90	C
ATOM	2216	CE1	TYR	A	405	64.638	52.282	10.033	1.00	30.48	C
ATOM	2217	CE2	TYR	A	405	65.449	54.546	10.001	1.00	30.64	C
ATOM	2218	CZ	TYR	A	405	65.041	53.423	10.707	1.00	30.22	C
ATOM	2219	OH	TYR	A	405	65.029	53.448	12.085	1.00	30.03	O
ATOM	2220	N	TRP	A	406	61.632	53.627	6.822	1.00	31.08	N
ATOM	2221	CA	TRP	A	406	60.574	54.555	7.186	1.00	30.89	C
ATOM	2222	C	TRP	A	406	60.134	54.345	8.629	1.00	31.03	C
ATOM	2223	O	TRP	A	406	60.190	53.231	9.150	1.00	30.22	O
ATOM	2224	CB	TRP	A	406	59.384	54.401	6.227	1.00	29.70	C
ATOM	2225	CG	TRP	A	406	58.715	53.059	6.267	1.00	28.77	C
ATOM	2226	CD1	TRP	A	406	57.695	52.675	7.090	1.00	28.91	C
ATOM	2227	CD2	TRP	A	406	59.018	51.924	5.448	1.00	28.70	C
ATOM	2228	NE1	TRP	A	406	57.342	51.374	6.833	1.00	29.02	N
ATOM	2229	CE2	TRP	A	406	58.139	50.887	5.831	1.00	28.47	C
ATOM	2230	CE3	TRP	A	406	59.947	51.681	4.426	1.00	28.73	C
ATOM	2231	CZ2	TRP	A	406	58.158	49.624	5.228	1.00	28.64	C
ATOM	2232	CZ3	TRP	A	406	59.967	50.423	3.825	1.00	29.12	C
ATOM	2233	CH2	TRP	A	406	59.075	49.411	4.231	1.00	29.01	C
ATOM	2234	N	GLY	A	407	59.708	55.428	9.270	1.00	31.77	N
ATOM	2235	CA	GLY	A	407	59.270	55.349	10.652	1.00	32.35	C
ATOM	2236	C	GLY	A	407	57.927	54.665	10.816	1.00	32.51	C
ATOM	2237	O	GLY	A	407	57.124	54.619	9.887	1.00	32.50	O
ATOM	2238	N	GLU	A	408	57.685	54.125	12.005	1.00	32.68	N
ATOM	2239	CA	GLU	A	408	56.428	53.450	12.296	1.00	32.74	C
ATOM	2240	C	GLU	A	408	55.302	54.465	12.443	1.00	33.30	C
ATOM	2241	O	GLU	A	408	54.127	54.106	12.447	1.00	33.00	O
ATOM	2242	CB	GLU	A	408	56.562	52.625	13.576	1.00	32.42	C
ATOM	2243	CG	GLU	A	408	57.342	51.343	13.382	1.00	32.27	C
ATOM	2244	CD	GLU	A	408	56.618	50.373	12.460	1.00	32.10	C
ATOM	2245	OE1	GLU	A	408	55.511	49.930	12.824	1.00	31.95	O
ATOM	2246	OE2	GLU	A	408	57.149	50.059	11.376	1.00	31.80	O
ATOM	2247	N	GLY	A	409	55.670	55.736	12.563	1.00	34.53	N
ATOM	2248	CA	GLY	A	409	54.677	56.784	12.702	1.00	36.36	C
ATOM	2249	C	GLY	A	409	54.250	57.358	11.362	1.00	37.80	C
ATOM	2250	O	GLY	A	409	53.313	58.148	11.291	1.00	37.85	O
ATOM	2251	N	SER	A	410	54.934	56.965	10.293	1.00	39.37	N
ATOM	2252	CA	SER	A	410	54.598	57.462	8.963	1.00	41.45	C
ATOM	2253	C	SER	A	410	53.291	56.839	8.485	1.00	43.20	C
ATOM	2254	O	SER	A	410	52.945	55.723	8.876	1.00	42.83	O
ATOM	2255	CB	SER	A	410	55.715	57.135	7.971	1.00	40.60	C
ATOM	2256	OG	SER	A	410	55.795	55.740	7.738	1.00	40.47	O
ATOM	2257	N	SER	A	411	52.564	57.566	7.642	1.00	45.39	N
ATOM	2258	CA	SER	A	411	51.300	57.065	7.120	1.00	47.54	C
ATOM	2259	C	SER	A	411	51.556	55.777	6.347	1.00	48.82	C
ATOM	2260	O	SER	A	411	50.699	54.897	6.287	1.00	48.87	O
ATOM	2261	CB	SER	A	411	50.642	58.113	6.212	1.00	47.83	C

TABLE 3

ATOM	2262	OG	SER	A	411	51.518	58.534	5.180	1.00	48.13	O
ATOM	2263	N	ARG	A	412	52.750	55.669	5.770	1.00	50.57	N
ATOM	2264	CA	ARG	A	412	53.125	54.483	5.009	1.00	52.38	C
ATOM	2265	C	ARG	A	412	53.169	53.244	5.895	1.00	53.64	C
ATOM	2266	O	ARG	A	412	52.940	52.130	5.426	1.00	53.63	O
ATOM	2267	CB	ARG	A	412	54.495	54.677	4.351	1.00	52.24	C
ATOM	2268	CG	ARG	A	412	55.008	53.420	3.652	1.00	52.42	C
ATOM	2269	CD	ARG	A	412	56.351	53.628	2.971	1.00	52.24	C
ATOM	2270	NE	ARG	A	412	56.789	52.412	2.286	1.00	52.01	N
ATOM	2271	CZ	ARG	A	412	57.920	52.298	1.596	1.00	52.09	C
ATOM	2272	NH1	ARG	A	412	58.747	53.329	1.487	1.00	51.74	N
ATOM	2273	NH2	ARG	A	412	58.226	51.145	1.014	1.00	52.05	N
ATOM	2274	N	ALA	A	413	53.465	53.445	7.176	1.00	55.35	N
ATOM	2275	CA	ALA	A	413	53.555	52.344	8.128	1.00	57.35	C
ATOM	2276	C	ALA	A	413	52.196	51.934	8.682	1.00	58.87	C
ATOM	2277	O	ALA	A	413	51.760	50.799	8.501	1.00	58.87	O
ATOM	2278	CB	ALA	A	413	54.483	52.725	9.278	1.00	56.92	C
ATOM	2279	N	ARG	A	414	51.532	52.858	9.368	1.00	61.25	N
ATOM	2280	CA	ARG	A	414	50.232	52.558	9.945	1.00	63.66	C
ATOM	2281	C	ARG	A	414	49.102	52.862	8.968	1.00	64.89	C
ATOM	2282	O	ARG	A	414	48.824	54.018	8.648	1.00	65.40	O
ATOM	2283	CB	ARG	A	414	50.040	53.330	11.259	1.00	64.13	C
ATOM	2284	CG	ARG	A	414	50.007	54.843	11.139	1.00	65.06	C
ATOM	2285	CD	ARG	A	414	49.833	55.477	12.511	1.00	65.70	C
ATOM	2286	NE	ARG	A	414	49.344	56.850	12.427	1.00	66.48	N
ATOM	2287	CZ	ARG	A	414	49.075	57.614	13.481	1.00	66.77	C
ATOM	2288	NH1	ARG	A	414	49.250	57.143	14.709	1.00	66.88	N
ATOM	2289	NH2	ARG	A	414	48.615	58.846	13.311	1.00	67.02	N
ATOM	2290	N	ASN	A	415	48.467	51.799	8.486	1.00	66.35	N
ATOM	2291	CA	ASN	A	415	47.361	51.907	7.542	1.00	67.56	C
ATOM	2292	C	ASN	A	415	46.837	50.495	7.276	1.00	67.89	C
ATOM	2293	O	ASN	A	415	46.002	50.282	6.397	1.00	68.21	O
ATOM	2294	CB	ASN	A	415	47.840	52.552	6.233	1.00	68.15	C
ATOM	2295	CG	ASN	A	415	46.701	53.155	5.418	1.00	68.99	C
ATOM	2296	OD1	ASN	A	415	45.788	52.454	4.978	1.00	69.44	O
ATOM	2297	ND2	ASN	A	415	46.756	54.466	5.215	1.00	69.28	N
ATOM	2298	N	TRP	A	416	47.343	49.534	8.045	1.00	68.11	N
ATOM	2299	CA	TRP	A	416	46.932	48.140	7.915	1.00	68.12	C
ATOM	2300	C	TRP	A	416	45.656	47.901	8.719	1.00	68.17	C
ATOM	2301	O	TRP	A	416	44.616	47.529	8.171	1.00	68.31	O
ATOM	2302	CB	TRP	A	416	48.040	47.209	8.424	1.00	68.13	C
ATOM	2303	CG	TRP	A	416	48.339	47.382	9.886	1.00	67.91	C
ATOM	2304	CD1	TRP	A	416	49.047	48.397	10.465	1.00	67.92	C
ATOM	2305	CD2	TRP	A	416	47.868	46.558	10.960	1.00	67.76	C
ATOM	2306	NE1	TRP	A	416	49.040	48.259	11.834	1.00	67.80	N
ATOM	2307	CE2	TRP	A	416	48.323	47.139	12.164	1.00	67.78	C
ATOM	2308	CE3	TRP	A	416	47.101	45.388	11.021	1.00	67.62	C
ATOM	2309	CZ2	TRP	A	416	48.036	46.588	13.419	1.00	67.74	C
ATOM	2310	CZ3	TRP	A	416	46.815	44.839	12.268	1.00	67.75	C
ATOM	2311	CH2	TRP	A	416	47.282	45.441	13.450	1.00	67.77	C
ATOM	2312	N	GLU	A	430	49.118	63.275	11.644	1.00	73.03	N
ATOM	2313	CA	GLU	A	430	50.037	62.232	12.086	1.00	72.84	C
ATOM	2314	C	GLU	A	430	51.464	62.554	11.659	1.00	72.49	C
ATOM	2315	O	GLU	A	430	51.709	63.560	10.992	1.00	72.57	O
ATOM	2316	CB	GLU	A	430	49.622	60.882	11.499	1.00	73.23	C
ATOM	2317	CG	GLU	A	430	49.699	60.809	9.981	1.00	73.60	C
ATOM	2318	CD	GLU	A	430	49.250	59.466	9.439	1.00	73.90	C

TABLE 3

ATOM	2319	OE1	GLU	A	430	49.840	58.437	9.831	1.00	73.94	O
ATOM	2320	OE2	GLU	A	430	48.308	59.439	8.619	1.00	74.25	O
ATOM	2321	N	GLU	A	431	52.403	61.695	12.046	1.00	71.87	N
ATOM	2322	CA	GLU	A	431	53.803	61.891	11.692	1.00	71.10	C
ATOM	2323	C	GLU	A	431	54.066	61.249	10.333	1.00	70.43	C
ATOM	2324	O	GLU	A	431	53.136	60.792	9.666	1.00	70.43	O
ATOM	2325	CB	GLU	A	431	54.714	61.254	12.744	1.00	71.29	C
ATOM	2326	CG	GLU	A	431	56.138	61.783	12.716	1.00	71.71	C
ATOM	2327	CD	GLU	A	431	57.111	60.917	13.493	1.00	71.87	C
ATOM	2328	OE1	GLU	A	431	56.854	60.632	14.684	1.00	72.06	O
ATOM	2329	OE2	GLU	A	431	58.141	60.528	12.907	1.00	71.88	O
ATOM	2330	N	GLY	A	432	55.331	61.211	9.926	1.00	69.40	N
ATOM	2331	CA	GLY	A	432	55.667	60.614	8.647	1.00	67.99	C
ATOM	2332	C	GLY	A	432	57.101	60.847	8.215	1.00	66.90	C
ATOM	2333	O	GLY	A	432	57.524	61.987	8.030	1.00	67.35	O
ATOM	2334	N	VAL	A	433	57.853	59.763	8.054	1.00	65.49	N
ATOM	2335	CA	VAL	A	433	59.246	59.851	7.631	1.00	63.66	C
ATOM	2336	C	VAL	A	433	59.611	58.651	6.760	1.00	62.12	C
ATOM	2337	O	VAL	A	433	59.537	57.503	7.200	1.00	61.66	O
ATOM	2338	CB	VAL	A	433	60.198	59.891	8.840	1.00	64.04	C
ATOM	2339	CG1	VAL	A	433	61.624	60.100	8.366	1.00	64.18	C
ATOM	2340	CG2	VAL	A	433	59.784	60.994	9.797	1.00	64.08	C
ATOM	2341	N	ASP	A	434	60.008	58.930	5.522	1.00	60.25	N
ATOM	2342	CA	ASP	A	434	60.377	57.892	4.566	1.00	58.26	C
ATOM	2343	C	ASP	A	434	61.718	58.280	3.947	1.00	56.78	C
ATOM	2344	O	ASP	A	434	61.881	59.405	3.475	1.00	56.70	O
ATOM	2345	CB	ASP	A	434	59.311	57.805	3.470	1.00	58.76	C
ATOM	2346	CG	ASP	A	434	59.280	56.456	2.783	1.00	58.92	C
ATOM	2347	OD1	ASP	A	434	60.357	55.902	2.487	1.00	59.73	O
ATOM	2348	OD2	ASP	A	434	58.168	55.955	2.525	1.00	59.23	O
ATOM	2349	N	SER	A	435	62.676	57.359	3.944	1.00	54.66	N
ATOM	2350	CA	SER	A	435	63.988	57.664	3.382	1.00	52.26	C
ATOM	2351	C	SER	A	435	64.779	56.437	2.938	1.00	50.24	C
ATOM	2352	O	SER	A	435	64.263	55.319	2.913	1.00	49.77	O
ATOM	2353	CB	SER	A	435	64.815	58.454	4.400	1.00	52.83	C
ATOM	2354	OG	SER	A	435	65.010	57.701	5.586	1.00	53.50	O
ATOM	2355	N	TYR	A	436	66.040	56.668	2.586	1.00	47.86	N
ATOM	2356	CA	TYR	A	436	66.935	55.609	2.140	1.00	45.83	C
ATOM	2357	C	TYR	A	436	68.198	55.593	2.993	1.00	43.91	C
ATOM	2358	O	TYR	A	436	68.622	56.626	3.513	1.00	43.83	O
ATOM	2359	CB	TYR	A	436	67.333	55.825	0.677	1.00	46.59	C
ATOM	2360	CG	TYR	A	436	66.196	55.715	-0.312	1.00	47.13	C
ATOM	2361	CD1	TYR	A	436	65.599	54.485	-0.585	1.00	47.53	C
ATOM	2362	CD2	TYR	A	436	65.713	56.843	-0.974	1.00	47.79	C
ATOM	2363	CE1	TYR	A	436	64.547	54.380	-1.493	1.00	48.14	C
ATOM	2364	CE2	TYR	A	436	64.661	56.751	-1.882	1.00	48.43	C
ATOM	2365	CZ	TYR	A	436	64.083	55.517	-2.136	1.00	48.48	C
ATOM	2366	OH	TYR	A	436	63.036	55.424	-3.024	1.00	49.29	O
ATOM	2367	N	VAL	A	437	68.786	54.412	3.140	1.00	41.44	N
ATOM	2368	CA	VAL	A	437	70.018	54.251	3.901	1.00	39.25	C
ATOM	2369	C	VAL	A	437	70.997	53.500	3.010	1.00	37.73	C
ATOM	2370	O	VAL	A	437	70.604	52.608	2.261	1.00	37.14	O
ATOM	2371	CB	VAL	A	437	69.786	53.455	5.209	1.00	38.97	C
ATOM	2372	CG1	VAL	A	437	68.841	54.225	6.119	1.00	39.50	C
ATOM	2373	CG2	VAL	A	437	69.221	52.084	4.901	1.00	38.52	C
ATOM	2374	N	PRO	A	438	72.289	53.852	3.075	1.00	37.00	N
ATOM	2375	CA	PRO	A	438	73.280	53.169	2.239	1.00	35.94	C

TABLE 3

ATOM	2376	C	PRO A 438	73.390	51.682	2.547	1.00	34.96	C
ATOM	2377	O	PRO A 438	73.442	51.282	3.710	1.00	34.43	O
ATOM	2378	CB	PRO A 438	74.569	53.929	2.543	1.00	36.50	C
ATOM	2379	CG	PRO A 438	74.377	54.345	3.981	1.00	37.42	C
ATOM	2380	CD	PRO A 438	72.935	54.813	3.988	1.00	37.02	C
ATOM	2381	N	TYR A 439	73.412	50.872	1.492	1.00	33.53	N
ATOM	2382	CA	TYR A 439	73.526	49.423	1.619	1.00	32.47	C
ATOM	2383	C	TYR A 439	74.858	49.089	2.284	1.00	31.86	C
ATOM	2384	O	TYR A 439	75.881	49.681	1.959	1.00	31.19	O
ATOM	2385	CB	TYR A 439	73.459	48.778	0.232	1.00	31.92	C
ATOM	2386	CG	TYR A 439	73.590	47.273	0.230	1.00	31.72	C
ATOM	2387	CD1	TYR A 439	72.683	46.476	0.925	1.00	31.68	C
ATOM	2388	CD2	TYR A 439	74.601	46.643	-0.497	1.00	31.71	C
ATOM	2389	CE1	TYR A 439	72.775	45.087	0.896	1.00	32.18	C
ATOM	2390	CE2	TYR A 439	74.702	45.254	-0.533	1.00	32.39	C
ATOM	2391	CZ	TYR A 439	73.784	44.484	0.165	1.00	32.74	C
ATOM	2392	OH	TYR A 439	73.863	43.112	0.124	1.00	34.28	O
ATOM	2393	N	ALA A 440	74.847	48.133	3.208	1.00	31.96	N
ATOM	2394	CA	ALA A 440	76.070	47.765	3.913	1.00	32.22	C
ATOM	2395	C	ALA A 440	76.429	46.297	3.758	1.00	32.05	C
ATOM	2396	O	ALA A 440	77.465	45.856	4.244	1.00	32.90	O
ATOM	2397	CB	ALA A 440	75.938	48.115	5.396	1.00	31.52	C
ATOM	2398	N	GLY A 441	75.577	45.538	3.080	1.00	32.08	N
ATOM	2399	CA	GLY A 441	75.857	44.127	2.899	1.00	32.00	C
ATOM	2400	C	GLY A 441	75.250	43.262	3.991	1.00	32.35	C
ATOM	2401	O	GLY A 441	74.248	43.639	4.602	1.00	31.44	O
ATOM	2402	N	LYS A 442	75.867	42.106	4.231	1.00	32.08	N
ATOM	2403	CA	LYS A 442	75.411	41.147	5.235	1.00	32.60	C
ATOM	2404	C	LYS A 442	75.531	41.671	6.664	1.00	31.49	C
ATOM	2405	O	LYS A 442	76.495	42.350	7.012	1.00	31.52	O
ATOM	2406	CB	LYS A 442	76.216	39.848	5.129	1.00	34.46	C
ATOM	2407	CG	LYS A 442	76.072	39.097	3.814	1.00	37.78	C
ATOM	2408	CD	LYS A 442	74.734	38.377	3.714	1.00	39.58	C
ATOM	2409	CE	LYS A 442	74.725	37.415	2.527	1.00	41.54	C
ATOM	2410	NZ	LYS A 442	73.453	36.640	2.425	1.00	42.55	N
ATOM	2411	N	LEU A 443	74.548	41.332	7.491	1.00	30.52	N
ATOM	2412	CA	LEU A 443	74.538	41.751	8.887	1.00	29.23	C
ATOM	2413	C	LEU A 443	75.790	41.271	9.624	1.00	29.23	C
ATOM	2414	O	LEU A 443	76.430	42.040	10.343	1.00	28.36	O
ATOM	2415	CB	LEU A 443	73.281	41.208	9.582	1.00	28.43	C
ATOM	2416	CG	LEU A 443	73.124	41.454	11.087	1.00	28.11	C
ATOM	2417	CD1	LEU A 443	71.648	41.409	11.471	1.00	27.84	C
ATOM	2418	CD2	LEU A 443	73.920	40.408	11.863	1.00	28.16	C
ATOM	2419	N	LYS A 444	76.136	40.003	9.423	1.00	29.23	N
ATOM	2420	CA	LYS A 444	77.282	39.382	10.083	1.00	30.71	C
ATOM	2421	C	LYS A 444	78.583	40.179	10.103	1.00	30.91	C
ATOM	2422	O	LYS A 444	79.124	40.453	11.174	1.00	30.45	O
ATOM	2423	CB	LYS A 444	77.562	38.002	9.477	1.00	31.85	C
ATOM	2424	CG	LYS A 444	78.712	37.262	10.164	1.00	34.22	C
ATOM	2425	CD	LYS A 444	78.908	35.868	9.587	1.00	36.27	C
ATOM	2426	CE	LYS A 444	80.016	35.126	10.314	1.00	37.68	C
ATOM	2427	NZ	LYS A 444	81.325	35.828	10.197	1.00	38.57	N
ATOM	2428	N	ASP A 445	79.087	40.542	8.927	1.00	30.82	N
ATOM	2429	CA	ASP A 445	80.344	41.280	8.829	1.00	31.15	C
ATOM	2430	C	ASP A 445	80.303	42.662	9.462	1.00	30.19	C
ATOM	2431	O	ASP A 445	81.296	43.125	10.022	1.00	29.83	O
ATOM	2432	CB	ASP A 445	80.757	41.412	7.363	1.00	33.63	C

TABLE 3

ATOM	2433	CG	ASP	A	445	80.781	40.079	6.650	1.00	35.59	C
ATOM	2434	OD1	ASP	A	445	81.474	39.158	7.136	1.00	36.48	O
ATOM	2435	OD2	ASP	A	445	80.102	39.953	5.610	1.00	37.86	O
ATOM	2436	N	ASN	A	446	79.157	43.321	9.366	1.00	28.50	N
ATOM	2437	CA	ASN	A	446	79.005	44.657	9.922	1.00	28.18	C
ATOM	2438	C	ASN	A	446	78.957	44.660	11.450	1.00	27.76	C
ATOM	2439	O	ASN	A	446	79.575	45.506	12.092	1.00	27.67	O
ATOM	2440	CB	ASN	A	446	77.750	45.306	9.347	1.00	28.54	C
ATOM	2441	CG	ASN	A	446	77.938	45.755	7.909	1.00	28.71	C
ATOM	2442	OD1	ASN	A	446	78.508	46.815	7.652	1.00	29.83	O
ATOM	2443	ND2	ASN	A	446	77.473	44.945	6.967	1.00	27.87	N
ATOM	2444	N	VAL	A	447	78.222	43.714	12.023	1.00	27.34	N
ATOM	2445	CA	VAL	A	447	78.105	43.600	13.474	1.00	27.67	C
ATOM	2446	C	VAL	A	447	79.461	43.220	14.071	1.00	28.37	C
ATOM	2447	O	VAL	A	447	79.878	43.770	15.088	1.00	28.42	O
ATOM	2448	CB	VAL	A	447	77.043	42.542	13.850	1.00	27.28	C
ATOM	2449	CG1	VAL	A	447	77.154	42.172	15.324	1.00	26.67	C
ATOM	2450	CG2	VAL	A	447	75.657	43.091	13.553	1.00	26.56	C
ATOM	2451	N	GLU	A	448	80.151	42.287	13.426	1.00	28.89	N
ATOM	2452	CA	GLU	A	448	81.464	41.861	13.897	1.00	30.04	C
ATOM	2453	C	GLU	A	448	82.412	43.061	13.971	1.00	29.13	C
ATOM	2454	O	GLU	A	448	83.127	43.239	14.960	1.00	28.39	O
ATOM	2455	CB	GLU	A	448	82.029	40.790	12.959	1.00	32.21	C
ATOM	2456	CG	GLU	A	448	83.451	40.343	13.273	1.00	35.95	C
ATOM	2457	CD	GLU	A	448	83.912	39.210	12.365	1.00	38.46	C
ATOM	2458	OE1	GLU	A	448	83.834	39.364	11.124	1.00	40.14	O
ATOM	2459	OE2	GLU	A	448	84.351	38.163	12.890	1.00	40.41	O
ATOM	2460	N	ALA	A	449	82.404	43.889	12.930	1.00	27.90	N
ATOM	2461	CA	ALA	A	449	83.265	45.069	12.893	1.00	27.67	C
ATOM	2462	C	ALA	A	449	82.870	46.080	13.974	1.00	27.21	C
ATOM	2463	O	ALA	A	449	83.725	46.612	14.685	1.00	26.68	O
ATOM	2464	CB	ALA	A	449	83.203	45.722	11.513	1.00	28.18	C
ATOM	2465	N	SER	A	450	81.573	46.343	14.097	1.00	26.17	N
ATOM	2466	CA	SER	A	450	81.090	47.279	15.105	1.00	26.52	C
ATOM	2467	C	SER	A	450	81.487	46.829	16.511	1.00	26.58	C
ATOM	2468	O	SER	A	450	82.062	47.603	17.281	1.00	26.69	O
ATOM	2469	CB	SER	A	450	79.562	47.408	15.032	1.00	26.11	C
ATOM	2470	OG	SER	A	450	79.154	48.048	13.833	1.00	25.91	O
ATOM	2471	N	LEU	A	451	81.186	45.575	16.839	1.00	25.76	N
ATOM	2472	CA	LEU	A	451	81.490	45.045	18.163	1.00	26.02	C
ATOM	2473	C	LEU	A	451	82.986	44.910	18.450	1.00	26.55	C
ATOM	2474	O	LEU	A	451	83.404	44.961	19.611	1.00	25.99	O
ATOM	2475	CB	LEU	A	451	80.767	43.709	18.372	1.00	25.37	C
ATOM	2476	CG	LEU	A	451	79.238	43.840	18.305	1.00	25.01	C
ATOM	2477	CD1	LEU	A	451	78.586	42.524	18.693	1.00	24.99	C
ATOM	2478	CD2	LEU	A	451	78.773	44.962	19.232	1.00	25.24	C
ATOM	2479	N	ASN	A	452	83.796	44.747	17.407	1.00	26.96	N
ATOM	2480	CA	ASN	A	452	85.240	44.661	17.618	1.00	28.17	C
ATOM	2481	C	ASN	A	452	85.722	46.016	18.133	1.00	27.59	C
ATOM	2482	O	ASN	A	452	86.624	46.094	18.968	1.00	26.76	O
ATOM	2483	CB	ASN	A	452	85.977	44.310	16.320	1.00	30.23	C
ATOM	2484	CG	ASN	A	452	86.089	42.815	16.099	1.00	33.77	C
ATOM	2485	OD1	ASN	A	452	86.244	42.048	17.050	1.00	36.57	O
ATOM	2486	ND2	ASN	A	452	86.034	42.393	14.839	1.00	35.31	N
ATOM	2487	N	LYS	A	453	85.104	47.081	17.632	1.00	27.29	N
ATOM	2488	CA	LYS	A	453	85.453	48.435	18.043	1.00	27.38	C
ATOM	2489	C	LYS	A	453	84.962	48.684	19.465	1.00	26.33	C



ATOM	2490	O	LYS	A	453	85.654	49.305	20.267	1.00	25.74	O
ATOM	2491	CB	LYS	A	453	84.835	49.453	17.076	1.00	29.18	C
ATOM	2492	CG	LYS	A	453	85.374	49.322	15.651	1.00	31.57	C
ATOM	2493	CD	LYS	A	453	84.545	50.103	14.637	1.00	33.43	C
ATOM	2494	CE	LYS	A	453	84.630	51.604	14.856	1.00	34.79	C
ATOM	2495	NZ	LYS	A	453	83.781	52.334	13.861	1.00	35.78	N
ATOM	2496	N	VAL	A	454	83.764	48.197	19.772	1.00	25.19	N
ATOM	2497	CA	VAL	A	454	83.200	48.351	21.104	1.00	24.18	C
ATOM	2498	C	VAL	A	454	84.108	47.638	22.114	1.00	24.77	C
ATOM	2499	O	VAL	A	454	84.455	48.194	23.159	1.00	23.53	O
ATOM	2500	CB	VAL	A	454	81.770	47.741	21.180	1.00	24.45	C
ATOM	2501	CG1	VAL	A	454	81.293	47.691	22.627	1.00	23.62	C
ATOM	2502	CG2	VAL	A	454	80.800	48.574	20.338	1.00	23.76	C
ATOM	2503	N	LYS	A	455	84.501	46.409	21.791	1.00	24.44	N
ATOM	2504	CA	LYS	A	455	85.355	45.634	22.683	1.00	24.98	C
ATOM	2505	C	LYS	A	455	86.728	46.266	22.878	1.00	25.10	C
ATOM	2506	O	LYS	A	455	87.273	46.254	23.984	1.00	24.49	O
ATOM	2507	CB	LYS	A	455	85.477	44.194	22.168	1.00	25.62	C
ATOM	2508	CG	LYS	A	455	84.136	43.465	22.213	1.00	27.11	C
ATOM	2509	CD	LYS	A	455	84.249	41.968	21.985	1.00	28.53	C
ATOM	2510	CE	LYS	A	455	84.339	41.611	20.517	1.00	29.62	C
ATOM	2511	NZ	LYS	A	455	84.059	40.156	20.315	1.00	30.79	N
ATOM	2512	N	SER	A	456	87.282	46.831	21.810	1.00	24.87	N
ATOM	2513	CA	SER	A	456	88.583	47.478	21.895	1.00	26.04	C
ATOM	2514	C	SER	A	456	88.477	48.690	22.831	1.00	25.43	C
ATOM	2515	O	SER	A	456	89.337	48.908	23.689	1.00	25.09	O
ATOM	2516	CB	SER	A	456	89.046	47.920	20.501	1.00	27.09	C
ATOM	2517	OG	SER	A	456	90.355	48.454	20.559	1.00	30.80	O
ATOM	2518	N	THR	A	457	87.414	49.471	22.671	1.00	24.22	N
ATOM	2519	CA	THR	A	457	87.214	50.640	23.520	1.00	24.20	C
ATOM	2520	C	THR	A	457	86.999	50.197	24.968	1.00	23.77	C
ATOM	2521	O	THR	A	457	87.484	50.835	25.900	1.00	23.17	O
ATOM	2522	CB	THR	A	457	86.013	51.470	23.035	1.00	24.69	C
ATOM	2523	OG1	THR	A	457	86.268	51.918	21.699	1.00	25.52	O
ATOM	2524	CG2	THR	A	457	85.791	52.680	23.934	1.00	24.52	C
ATOM	2525	N	MET	A	458	86.285	49.092	25.155	1.00	23.48	N
ATOM	2526	CA	MET	A	458	86.054	48.582	26.500	1.00	23.69	C
ATOM	2527	C	MET	A	458	87.395	48.265	27.160	1.00	23.66	C
ATOM	2528	O	MET	A	458	87.582	48.522	28.351	1.00	23.57	O
ATOM	2529	CB	MET	A	458	85.157	47.339	26.453	1.00	22.39	C
ATOM	2530	CG	MET	A	458	83.680	47.680	26.256	1.00	22.53	C
ATOM	2531	SD	MET	A	458	82.608	46.247	26.043	1.00	23.32	S
ATOM	2532	CE	MET	A	458	82.688	45.515	27.705	1.00	22.32	C
ATOM	2533	N	CYS	A	459	88.332	47.716	26.393	1.00	24.05	N
ATOM	2534	CA	CYS	A	459	89.649	47.413	26.947	1.00	25.56	C
ATOM	2535	C	CYS	A	459	90.409	48.701	27.281	1.00	25.13	C
ATOM	2536	O	CYS	A	459	91.214	48.725	28.215	1.00	24.61	O
ATOM	2537	CB	CYS	A	459	90.465	46.548	25.985	1.00	28.49	C
ATOM	2538	SG	CYS	A	459	90.054	44.772	26.089	1.00	33.40	S
ATOM	2539	N	ASN	A	460	90.160	49.766	26.519	1.00	24.08	N
ATOM	2540	CA	ASN	A	460	90.804	51.047	26.793	1.00	24.35	C
ATOM	2541	C	ASN	A	460	90.302	51.515	28.155	1.00	24.02	C
ATOM	2542	O	ASN	A	460	91.029	52.148	28.915	1.00	23.20	O
ATOM	2543	CB	ASN	A	460	90.412	52.110	25.759	1.00	24.60	C
ATOM	2544	CG	ASN	A	460	91.081	51.909	24.415	1.00	25.78	C
ATOM	2545	OD1	ASN	A	460	90.405	51.787	23.399	1.00	27.02	O
ATOM	2546	ND2	ASN	A	460	92.410	51.889	24.399	1.00	24.46	N

ATOM	2547	N	CYS	A	461	89.042	51.205	28.448	1.00	23.87	N
ATOM	2548	CA	CYS	A	461	88.422	51.611	29.704	1.00	24.41	C
ATOM	2549	C	CYS	A	461	88.660	50.633	30.848	1.00	24.32	C
ATOM	2550	O	CYS	A	461	88.180	50.852	31.958	1.00	25.56	O
ATOM	2551	CB	CYS	A	461	86.918	51.806	29.496	1.00	24.60	C
ATOM	2552	SG	CYS	A	461	86.525	53.116	28.308	1.00	26.96	S
ATOM	2553	N	GLY	A	462	89.389	49.556	30.570	1.00	24.32	N
ATOM	2554	CA	GLY	A	462	89.685	48.558	31.587	1.00	24.60	C
ATOM	2555	C	GLY	A	462	88.547	47.600	31.907	1.00	25.06	C
ATOM	2556	O	GLY	A	462	88.465	47.076	33.024	1.00	24.53	O
ATOM	2557	N	ALA	A	463	87.682	47.343	30.929	1.00	24.46	N
ATOM	2558	CA	ALA	A	463	86.539	46.463	31.147	1.00	24.56	C
ATOM	2559	C	ALA	A	463	86.489	45.254	30.234	1.00	24.52	C
ATOM	2560	O	ALA	A	463	86.647	45.372	29.018	1.00	24.90	O
ATOM	2561	CB	ALA	A	463	85.246	47.257	31.000	1.00	24.47	C
ATOM	2562	N	LEU	A	464	86.246	44.092	30.834	1.00	24.58	N
ATOM	2563	CA	LEU	A	464	86.139	42.840	30.096	1.00	24.71	C
ATOM	2564	C	LEU	A	464	84.683	42.423	29.927	1.00	23.91	C
ATOM	2565	O	LEU	A	464	84.387	41.458	29.224	1.00	24.47	O
ATOM	2566	CB	LEU	A	464	86.887	41.720	30.823	1.00	25.91	C
ATOM	2567	CG	LEU	A	464	88.397	41.634	30.616	1.00	27.36	C
ATOM	2568	CD1	LEU	A	464	88.947	40.476	31.448	1.00	28.44	C
ATOM	2569	CD2	LEU	A	464	88.702	41.420	29.147	1.00	27.33	C
ATOM	2570	N	THR	A	465	83.782	43.131	30.596	1.00	22.92	N
ATOM	2571	CA	THR	A	465	82.354	42.831	30.512	1.00	22.25	C
ATOM	2572	C	THR	A	465	81.568	44.129	30.548	1.00	21.44	C
ATOM	2573	O	THR	A	465	82.104	45.177	30.891	1.00	20.34	O
ATOM	2574	CB	THR	A	465	81.862	41.981	31.699	1.00	22.45	C
ATOM	2575	OG1	THR	A	465	81.932	42.762	32.899	1.00	22.22	O
ATOM	2576	CG2	THR	A	465	82.710	40.726	31.858	1.00	22.79	C
ATOM	2577	N	ILE	A	466	80.288	44.052	30.214	1.00	21.19	N
ATOM	2578	CA	ILE	A	466	79.447	45.236	30.230	1.00	20.76	C
ATOM	2579	C	ILE	A	466	79.254	45.736	31.666	1.00	20.40	C
ATOM	2580	O	ILE	A	466	79.358	46.929	31.927	1.00	19.90	O
ATOM	2581	CB	ILE	A	466	78.098	44.944	29.530	1.00	21.19	C
ATOM	2582	CG1	ILE	A	466	78.356	44.780	28.022	1.00	21.38	C
ATOM	2583	CG2	ILE	A	466	77.100	46.073	29.792	1.00	21.25	C
ATOM	2584	CD1	ILE	A	466	77.152	44.290	27.219	1.00	22.58	C
ATOM	2585	N	PRO	A	467	78.995	44.828	32.626	1.00	20.68	N
ATOM	2586	CA	PRO	A	467	78.822	45.333	33.991	1.00	20.34	C
ATOM	2587	C	PRO	A	467	80.094	46.009	34.510	1.00	21.02	C
ATOM	2588	O	PRO	A	467	80.025	47.006	35.216	1.00	21.23	O
ATOM	2589	CB	PRO	A	467	78.461	44.076	34.782	1.00	20.94	C
ATOM	2590	CG	PRO	A	467	77.717	43.250	33.750	1.00	20.39	C
ATOM	2591	CD	PRO	A	467	78.606	43.411	32.538	1.00	19.76	C
ATOM	2592	N	GLN	A	468	81.259	45.475	34.160	1.00	21.22	N
ATOM	2593	CA	GLN	A	468	82.491	46.093	34.627	1.00	21.96	C
ATOM	2594	C	GLN	A	468	82.648	47.477	33.992	1.00	22.09	C
ATOM	2595	O	GLN	A	468	83.108	48.412	34.644	1.00	22.10	O
ATOM	2596	CB	GLN	A	468	83.709	45.217	34.308	1.00	22.23	C
ATOM	2597	CG	GLN	A	468	85.015	45.839	34.780	1.00	22.84	C
ATOM	2598	CD	GLN	A	468	86.211	44.908	34.692	1.00	22.48	C
ATOM	2599	OE1	GLN	A	468	86.355	44.141	33.740	1.00	22.48	O
ATOM	2600	NE2	GLN	A	468	87.097	44.997	35.683	1.00	22.38	N
ATOM	2601	N	LEU	A	469	82.264	47.603	32.722	1.00	21.64	N
ATOM	2602	CA	LEU	A	469	82.344	48.886	32.027	1.00	21.89	C
ATOM	2603	C	LEU	A	469	81.434	49.905	32.714	1.00	22.01	C

TABLE 3

ATOM	2604	O	LEU	A	469	81.818	51.051	32.925	1.00	21.53	O
ATOM	2605	CB	LEU	A	469	81.904	48.735	30.564	1.00	21.51	C
ATOM	2606	CG	LEU	A	469	81.761	50.027	29.745	1.00	22.03	C
ATOM	2607	CD1	LEU	A	469	83.134	50.627	29.484	1.00	21.95	C
ATOM	2608	CD2	LEU	A	469	81.056	49.727	28.414	1.00	22.12	C
ATOM	2609	N	GLN	A	470	80.225	49.473	33.058	1.00	22.00	N
ATOM	2610	CA	GLN	A	470	79.254	50.349	33.696	1.00	23.44	C
ATOM	2611	C	GLN	A	470	79.743	50.838	35.055	1.00	24.51	C
ATOM	2612	O	GLN	A	470	79.377	51.922	35.513	1.00	25.02	O
ATOM	2613	CB	GLN	A	470	77.917	49.612	33.817	1.00	23.09	C
ATOM	2614	CG	GLN	A	470	77.402	49.156	32.439	1.00	23.12	C
ATOM	2615	CD	GLN	A	470	76.092	48.397	32.492	1.00	22.83	C
ATOM	2616	OE1	GLN	A	470	75.855	47.613	33.406	1.00	23.32	O
ATOM	2617	NE2	GLN	A	470	75.242	48.610	31.488	1.00	21.97	N
ATOM	2618	N	SER	A	471	80.590	50.039	35.687	1.00	25.04	N
ATOM	2619	CA	SER	A	471	81.139	50.391	36.983	1.00	26.85	C
ATOM	2620	C	SER	A	471	82.378	51.284	36.863	1.00	27.29	C
ATOM	2621	O	SER	A	471	82.530	52.246	37.614	1.00	27.87	O
ATOM	2622	CB	SER	A	471	81.500	49.115	37.749	1.00	27.07	C
ATOM	2623	OG	SER	A	471	82.193	49.422	38.943	1.00	30.83	O
ATOM	2624	N	LYS	A	472	83.244	50.981	35.900	1.00	27.53	N
ATOM	2625	CA	LYS	A	472	84.496	51.723	35.732	1.00	28.78	C
ATOM	2626	C	LYS	A	472	84.519	52.903	34.768	1.00	27.72	C
ATOM	2627	O	LYS	A	472	85.421	53.733	34.840	1.00	27.66	O
ATOM	2628	CB	LYS	A	472	85.604	50.752	35.316	1.00	29.70	C
ATOM	2629	CG	LYS	A	472	85.789	49.598	36.274	1.00	33.23	C
ATOM	2630	CD	LYS	A	472	86.819	48.602	35.768	1.00	33.84	C
ATOM	2631	CE	LYS	A	472	88.218	49.184	35.759	1.00	34.76	C
ATOM	2632	NZ	LYS	A	472	89.209	48.107	35.470	1.00	34.52	N
ATOM	2633	N	ALA	A	473	83.548	52.976	33.865	1.00	26.96	N
ATOM	2634	CA	ALA	A	473	83.522	54.045	32.870	1.00	26.73	C
ATOM	2635	C	ALA	A	473	83.663	55.472	33.395	1.00	26.34	C
ATOM	2636	O	ALA	A	473	83.045	55.853	34.389	1.00	26.04	O
ATOM	2637	CB	ALA	A	473	82.250	53.936	32.023	1.00	26.80	C
ATOM	2638	N	LYS	A	474	84.502	56.248	32.713	1.00	26.28	N
ATOM	2639	CA	LYS	A	474	84.712	57.656	33.034	1.00	26.69	C
ATOM	2640	C	LYS	A	474	84.166	58.376	31.807	1.00	26.49	C
ATOM	2641	O	LYS	A	474	84.724	58.278	30.712	1.00	25.96	O
ATOM	2642	CB	LYS	A	474	86.202	57.955	33.241	1.00	27.26	C
ATOM	2643	CG	LYS	A	474	86.777	57.279	34.485	1.00	28.54	C
ATOM	2644	CD	LYS	A	474	88.207	57.724	34.778	1.00	30.16	C
ATOM	2645	CE	LYS	A	474	89.177	57.220	33.745	1.00	30.74	C
ATOM	2646	NZ	LYS	A	474	90.571	57.651	34.057	1.00	30.36	N
ATOM	2647	N	ILE	A	475	83.067	59.095	31.995	1.00	26.72	N
ATOM	2648	CA	ILE	A	475	82.403	59.763	30.885	1.00	27.59	C
ATOM	2649	C	ILE	A	475	82.413	61.281	30.960	1.00	28.14	C
ATOM	2650	O	ILE	A	475	81.900	61.871	31.910	1.00	28.29	O
ATOM	2651	CB	ILE	A	475	80.943	59.278	30.794	1.00	27.25	C
ATOM	2652	CG1	ILE	A	475	80.919	57.743	30.797	1.00	27.67	C
ATOM	2653	CG2	ILE	A	475	80.281	59.832	29.537	1.00	27.73	C
ATOM	2654	CD1	ILE	A	475	79.522	57.134	30.885	1.00	26.56	C
ATOM	2655	N	THR	A	476	82.982	61.912	29.941	1.00	28.53	N
ATOM	2656	CA	THR	A	476	83.045	63.364	29.916	1.00	29.40	C
ATOM	2657	C	THR	A	476	82.184	63.974	28.820	1.00	29.85	C
ATOM	2658	O	THR	A	476	82.029	63.407	27.734	1.00	28.69	O
ATOM	2659	CB	THR	A	476	84.488	63.865	29.722	1.00	29.27	C
ATOM	2660	OG1	THR	A	476	84.501	65.293	29.813	1.00	30.19	O

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ATOM	2661	CG2	THR	A	476	85.027	63.445	28.353	1.00	28.75	C
ATOM	2662	N	LEU	A	477	81.615	65.133	29.126	1.00	30.92	N
ATOM	2663	CA	LEU	A	477	80.791	65.863	28.176	1.00	33.43	C
ATOM	2664	C	LEU	A	477	81.792	66.681	27.363	1.00	34.68	C
ATOM	2665	O	LEU	A	477	82.829	67.084	27.887	1.00	34.58	O
ATOM	2666	CB	LEU	A	477	79.831	66.795	28.925	1.00	34.07	C
ATOM	2667	CG	LEU	A	477	78.671	67.452	28.173	1.00	35.06	C
ATOM	2668	CD1	LEU	A	477	77.683	66.393	27.716	1.00	34.39	C
ATOM	2669	CD2	LEU	A	477	77.975	68.449	29.094	1.00	35.94	C
ATOM	2670	N	VAL	A	478	81.497	66.910	26.089	1.00	36.01	N
ATOM	2671	CA	VAL	A	478	82.388	67.688	25.234	1.00	37.55	C
ATOM	2672	C	VAL	A	478	81.741	69.041	24.929	1.00	38.64	C
ATOM	2673	O	VAL	A	478	80.517	69.151	24.884	1.00	37.96	O
ATOM	2674	CB	VAL	A	478	82.681	66.929	23.919	1.00	37.92	C
ATOM	2675	CG1	VAL	A	478	83.612	67.732	23.046	1.00	38.33	C
ATOM	2676	CG2	VAL	A	478	83.308	65.577	24.234	1.00	38.01	C
ATOM	2677	N	SER	A	479	82.559	70.073	24.733	1.00	40.23	N
ATOM	2678	CA	SER	A	479	82.034	71.408	24.452	1.00	42.03	C
ATOM	2679	C	SER	A	479	81.414	71.483	23.062	1.00	43.58	C
ATOM	2680	O	SER	A	479	81.868	70.818	22.130	1.00	43.18	O
ATOM	2681	CB	SER	A	479	83.139	72.465	24.572	1.00	41.76	C
ATOM	2682	OG	SER	A	479	84.069	72.363	23.508	1.00	41.31	O
ATOM	2683	N	SER	A	480	80.373	72.299	22.930	1.00	45.81	N
ATOM	2684	CA	SER	A	480	79.688	72.465	21.653	1.00	48.45	C
ATOM	2685	C	SER	A	480	80.615	73.067	20.602	1.00	49.80	C
ATOM	2686	O	SER	A	480	80.426	72.859	19.402	1.00	50.06	O
ATOM	2687	CB	SER	A	480	78.450	73.352	21.830	1.00	48.66	C
ATOM	2688	OG	SER	A	480	78.778	74.574	22.468	1.00	50.04	O
ATOM	2689	N	VAL	A	481	81.622	73.805	21.062	1.00	51.44	N
ATOM	2690	CA	VAL	A	481	82.584	74.442	20.168	1.00	53.08	C
ATOM	2691	C	VAL	A	481	83.452	73.408	19.462	1.00	53.99	C
ATOM	2692	O	VAL	A	481	83.755	73.544	18.277	1.00	54.37	O
ATOM	2693	CB	VAL	A	481	83.515	75.402	20.936	1.00	53.14	C
ATOM	2694	CG1	VAL	A	481	84.397	76.161	19.958	1.00	53.54	C
ATOM	2695	CG2	VAL	A	481	82.698	76.363	21.775	1.00	53.62	C
ATOM	2696	N	SER	A	482	83.858	72.379	20.199	1.00	55.12	N
ATOM	2697	CA	SER	A	482	84.695	71.324	19.642	1.00	56.25	C
ATOM	2698	C	SER	A	482	83.890	70.412	18.722	1.00	57.11	C
ATOM	2699	O	SER	A	482	84.454	69.577	18.012	1.00	57.33	O
ATOM	2700	CB	SER	A	482	85.319	70.499	20.767	1.00	56.17	C
ATOM	2701	OG	SER	A	482	84.315	69.924	21.581	1.00	56.14	O
ATOM	2702	N	ILE	A	483	82.571	70.572	18.742	1.00	57.97	N
ATOM	2703	CA	ILE	A	483	81.693	69.769	17.899	1.00	58.92	C
ATOM	2704	C	ILE	A	483	81.319	70.545	16.639	1.00	59.33	C
ATOM	2705	O	ILE	A	483	81.588	70.028	15.535	1.00	59.84	O
ATOM	2706	CB	ILE	A	483	80.399	69.375	18.645	1.00	59.00	C
ATOM	2707	CG1	ILE	A	483	80.744	68.544	19.883	1.00	59.10	C
ATOM	2708	CG2	ILE	A	483	79.485	68.585	17.716	1.00	59.45	C
ATOM	2709	CD1	ILE	A	483	79.543	68.155	20.718	1.00	59.17	C
TER	2710		ILE	A	483						
HETATM	2711	K	K	A	900	52.243	59.799	29.172	0.75	29.54	K
HETATM	2712	P	IMP		602	67.273	54.643	14.906	1.00	25.76	P
HETATM	2713	O1P	IMP		602	66.861	54.580	13.478	1.00	26.22	O
HETATM	2714	O2P	IMP		602	68.037	53.408	15.254	1.00	26.63	O
HETATM	2715	O3P	IMP		602	68.090	55.908	15.218	1.00	25.72	O
HETATM	2716	O5*	IMP		602	66.048	54.751	15.914	1.00	25.69	O
HETATM	2717	C5*	IMP		602	65.054	53.735	15.819	1.00	23.90	C

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HETATM	2718	C4*	IMP	602	63.955	53.909	16.822	1.00	23.17	C
HETATM	2719	O4*	IMP	602	63.226	55.091	16.335	1.00	22.32	O
HETATM	2720	C3*	IMP	602	62.855	52.875	16.958	1.00	22.53	C
HETATM	2721	O3*	IMP	602	63.229	51.710	17.687	1.00	21.85	O
HETATM	2722	C2*	IMP	602	61.776	53.670	17.629	1.00	22.98	C
HETATM	2723	O2*	IMP	602	61.948	53.736	19.029	1.00	22.76	O
HETATM	2724	C1*	IMP	602	61.928	55.030	16.924	1.00	23.55	C
HETATM	2725	N9	IMP	602	60.928	55.202	15.816	1.00	24.16	N
HETATM	2726	C8	IMP	602	60.310	54.298	14.971	1.00	25.51	C
HETATM	2727	N7	IMP	602	59.490	54.866	14.137	1.00	25.39	N
HETATM	2728	C5	IMP	602	59.548	56.197	14.417	1.00	25.42	C
HETATM	2729	C6	IMP	602	58.866	57.320	13.831	1.00	26.39	C
HETATM	2730	O6	IMP	602	58.049	57.295	12.909	1.00	27.34	O
HETATM	2731	N1	IMP	602	59.213	58.576	14.425	1.00	26.64	N
HETATM	2732	C2	IMP	602	60.131	58.702	15.478	1.00	26.89	C
HETATM	2733	N3	IMP	602	60.765	57.630	16.021	1.00	25.55	N
HETATM	2734	C4	IMP	602	60.437	56.438	15.458	1.00	25.01	C
HETATM	2735	C1	MOA	600	59.312	58.341	19.371	1.00	30.41	C
HETATM	2736	C2	MOA	600	54.700	56.341	16.455	1.00	32.49	C
HETATM	2737	C3	MOA	600	53.578	55.627	16.198	1.00	33.53	C
HETATM	2738	C4	MOA	600	52.262	56.261	16.628	1.00	34.60	C
HETATM	2739	C5	MOA	600	51.704	55.529	17.856	1.00	35.56	C
HETATM	2740	C6	MOA	600	52.413	55.880	19.153	1.00	36.42	C
HETATM	2741	C7	MOA	600	58.717	53.456	19.827	1.00	29.24	C
HETATM	2742	C8	MOA	600	55.639	53.144	18.309	1.00	29.52	C
HETATM	2743	C9	MOA	600	53.564	54.254	15.513	1.00	33.79	C
HETATM	2744	C10	MOA	600	59.889	56.364	20.539	1.00	29.78	C
HETATM	2745	C11	MOA	600	58.905	56.011	19.445	1.00	29.43	C
HETATM	2746	C12	MOA	600	58.347	54.721	19.086	1.00	29.74	C
HETATM	2747	C13	MOA	600	57.416	54.689	17.974	1.00	30.13	C
HETATM	2748	C14	MOA	600	57.077	55.910	17.275	1.00	30.94	C
HETATM	2749	C15	MOA	600	57.655	57.164	17.672	1.00	30.68	C
HETATM	2750	C16	MOA	600	58.569	57.183	18.763	1.00	30.24	C
HETATM	2751	C17	MOA	600	56.107	55.881	16.099	1.00	32.03	C
HETATM	2752	O1	MOA	600	59.306	59.497	19.082	1.00	30.18	O
HETATM	2753	O2	MOA	600	60.036	57.818	20.365	1.00	29.58	O
HETATM	2754	O3	MOA	600	56.876	53.479	17.608	1.00	30.38	O
HETATM	2755	O4	MOA	600	57.314	58.318	16.987	1.00	32.33	O
HETATM	2756	O5	MOA	600	52.401	57.074	19.536	1.00	37.48	O
HETATM	2757	O6	MOA	600	52.985	54.959	19.780	1.00	35.87	O
HETATM	2758	O	HOH	1	59.924	29.679	22.414	1.00	50.51	O
HETATM	2759	O	HOH	2	79.013	41.426	29.423	1.00	18.90	O
HETATM	2760	O	HOH	3	58.751	44.934	36.922	1.00	19.77	O
HETATM	2761	O	HOH	4	70.195	53.954	21.764	1.00	22.57	O
HETATM	2762	O	HOH	5	65.251	60.127	24.411	1.00	21.78	O
HETATM	2763	O	HOH	6	75.493	43.370	30.924	1.00	20.48	O
HETATM	2764	O	HOH	7	56.253	78.397	34.291	1.00	25.40	O
HETATM	2765	O	HOH	8	66.025	47.704	38.822	1.00	22.86	O
HETATM	2766	O	HOH	9	56.894	58.199	28.230	1.00	22.26	O
HETATM	2767	O	HOH	10	70.506	52.801	14.222	1.00	25.03	O
HETATM	2768	O	HOH	11	63.871	40.741	7.794	1.00	24.61	O
HETATM	2769	O	HOH	12	60.616	40.963	2.773	1.00	57.79	O
HETATM	2770	O	HOH	13	72.961	57.112	35.993	1.00	22.52	O
HETATM	2771	O	HOH	14	74.407	45.323	32.761	1.00	26.87	O
HETATM	2772	O	HOH	15	86.443	54.944	31.105	1.00	24.24	O
HETATM	2773	O	HOH	16	64.957	58.145	21.206	1.00	26.57	O
HETATM	2774	O	HOH	17	58.226	37.978	34.604	1.00	28.06	O

TABLE 3

HETATM	2775	O	HOH	18	65.737	37.023	16.608	1.00	23.81	O
HETATM	2776	O	HOH	19	71.973	37.555	33.842	1.00	27.82	O
HETATM	2777	O	HOH	20	61.772	38.247	34.046	1.00	22.62	O
HETATM	2778	O	HOH	21	52.301	52.152	19.306	1.00	49.95	O
HETATM	2779	O	HOH	22	87.828	53.279	33.165	1.00	28.88	O
HETATM	2780	O	HOH	23	81.359	62.610	21.058	1.00	27.37	O
HETATM	2781	O	HOH	24	75.817	40.774	32.087	1.00	26.13	O
HETATM	2782	O	HOH	25	58.057	34.952	27.087	1.00	28.97	O
HETATM	2783	O	HOH	26	83.688	52.415	20.816	1.00	30.28	O
HETATM	2784	O	HOH	27	77.149	53.162	34.368	1.00	29.69	O
HETATM	2785	O	HOH	28	56.074	56.906	38.662	1.00	37.23	O
HETATM	2786	O	HOH	29	49.870	31.480	16.451	1.00	33.88	O
HETATM	2787	O	HOH	30	73.925	34.558	39.925	1.00	28.68	O
HETATM	2788	O	HOH	31	78.589	39.852	31.836	1.00	26.69	O
HETATM	2789	O	HOH	32	59.193	50.825	9.635	1.00	30.48	O
HETATM	2790	O	HOH	33	48.757	43.664	20.942	1.00	29.46	O
HETATM	2791	O	HOH	34	63.470	55.921	20.034	1.00	28.45	O
HETATM	2792	O	HOH	35	64.748	36.350	34.843	1.00	29.99	O
HETATM	2793	O	HOH	36	74.476	38.378	31.025	1.00	30.13	O
HETATM	2794	O	HOH	37	51.517	53.493	25.810	1.00	33.48	O
HETATM	2795	O	HOH	38	67.426	38.071	46.103	1.00	30.22	O
HETATM	2796	O	HOH	39	73.458	50.410	36.144	1.00	28.96	O
HETATM	2797	O	HOH	40	48.967	53.101	24.116	1.00	49.76	O
HETATM	2798	O	HOH	41	70.826	32.483	29.970	1.00	39.88	O
HETATM	2799	O	HOH	42	61.107	50.022	17.672	1.00	23.40	O
HETATM	2800	O	HOH	43	73.974	36.418	10.780	1.00	31.43	O
HETATM	2801	O	HOH	44	50.211	45.778	35.694	1.00	31.02	O
HETATM	2802	O	HOH	45	63.973	35.222	38.133	1.00	49.08	O
HETATM	2803	O	HOH	46	52.459	51.210	38.008	1.00	33.23	O
HETATM	2804	O	HOH	47	68.639	62.467	21.428	1.00	33.95	O
HETATM	2805	O	HOH	48	69.432	33.097	27.354	1.00	32.47	O
HETATM	2806	O	HOH	49	74.578	37.941	8.159	1.00	32.47	O
HETATM	2807	O	HOH	50	58.916	51.450	16.416	1.00	29.63	O
HETATM	2808	O	HOH	51	69.598	53.385	17.586	1.00	29.79	O
HETATM	2809	O	HOH	52	47.572	53.766	36.762	1.00	39.69	O
HETATM	2810	O	HOH	53	84.793	48.751	39.168	1.00	43.51	O
HETATM	2811	O	HOH	54	59.544	49.841	20.045	1.00	33.31	O
HETATM	2812	O	HOH	55	64.161	25.507	14.641	1.00	30.60	O
HETATM	2813	O	HOH	56	55.066	70.757	16.127	1.00	32.83	O
HETATM	2814	O	HOH	57	74.182	47.486	35.548	1.00	31.59	O
HETATM	2815	O	HOH	58	62.583	34.645	41.460	1.00	39.46	O
HETATM	2816	O	HOH	59	51.561	30.405	13.105	1.00	57.09	O
HETATM	2817	O	HOH	60	47.880	31.075	25.095	1.00	39.60	O
HETATM	2818	O	HOH	61	53.997	32.961	37.361	1.00	38.91	O
HETATM	2819	O	HOH	62	84.739	38.545	32.721	1.00	34.80	O
HETATM	2820	O	HOH	63	70.499	56.677	14.512	1.00	31.54	O
HETATM	2821	O	HOH	64	96.766	42.780	26.087	1.00	48.54	O
HETATM	2822	O	HOH	65	48.178	56.536	26.666	1.00	44.06	O
HETATM	2823	O	HOH	66	55.822	40.800	37.347	1.00	41.31	O
HETATM	2824	O	HOH	67	62.651	58.499	18.259	1.00	30.38	O
HETATM	2825	O	HOH	68	78.584	37.867	17.336	1.00	35.48	O
HETATM	2826	O	HOH	69	73.741	59.595	37.699	1.00	46.66	O
HETATM	2827	O	HOH	70	61.930	61.268	37.149	1.00	35.16	O
HETATM	2828	O	HOH	71	64.600	31.307	29.524	1.00	40.08	O
HETATM	2829	O	HOH	72	68.630	35.309	7.689	1.00	35.28	O
HETATM	2830	O	HOH	73	74.821	69.567	31.440	1.00	45.20	O
HETATM	2831	O	HOH	74	60.851	32.866	26.981	1.00	36.07	O

HETATM	2832	O	HOH	75	78.209	47.346	37.269	1.00	42.78	O
HETATM	2833	O	HOH	76	78.477	34.764	30.567	1.00	40.04	O
HETATM	2834	O	HOH	77	71.498	30.722	23.744	1.00	35.11	O
HETATM	2835	O	HOH	78	64.709	27.584	26.706	1.00	39.53	O
HETATM	2836	O	HOH	79	58.218	44.875	5.808	1.00	39.15	O
HETATM	2837	O	HOH	80	91.925	40.314	20.235	1.00	47.22	O
HETATM	2838	O	HOH	81	65.374	28.271	14.859	1.00	33.66	O
HETATM	2839	O	HOH	82	86.254	46.969	13.548	1.00	42.09	O
HETATM	2840	O	HOH	83	86.599	66.411	30.817	1.00	28.92	O
HETATM	2841	O	HOH	84	62.054	33.096	29.810	1.00	43.30	O
HETATM	2842	O	HOH	85	95.032	45.638	27.312	1.00	44.01	O
HETATM	2843	O	HOH	86	50.747	50.260	21.915	1.00	33.76	O
HETATM	2844	O	HOH	87	64.754	61.086	37.994	1.00	43.01	O
HETATM	2845	O	HOH	88	70.920	55.587	41.621	1.00	30.53	O
HETATM	2846	O	HOH	89	87.356	35.892	30.913	1.00	54.42	O
HETATM	2847	O	HOH	90	58.062	50.894	22.714	1.00	36.70	O
HETATM	2848	O	HOH	91	66.375	33.870	36.838	1.00	36.70	O
HETATM	2849	O	HOH	92	80.489	54.081	12.959	1.00	34.92	O
HETATM	2850	O	HOH	93	49.688	32.577	11.671	1.00	44.86	O
HETATM	2851	O	HOH	94	59.901	34.059	37.276	1.00	46.67	O
HETATM	2852	O	HOH	95	60.124	37.261	37.104	1.00	40.44	O
HETATM	2853	O	HOH	96	68.062	43.325	0.440	1.00	40.55	O
HETATM	2854	O	HOH	97	92.043	48.470	23.328	1.00	41.20	O
HETATM	2855	O	HOH	98	91.696	47.559	34.606	1.00	36.60	O
HETATM	2856	O	HOH	99	72.456	40.842	41.613	1.00	38.50	O
HETATM	2857	O	HOH	100	56.000	31.198	23.572	1.00	40.79	O
HETATM	2858	O	HOH	101	49.154	42.288	7.689	1.00	40.98	O
HETATM	2859	O	HOH	102	73.470	34.115	8.839	1.00	54.10	O
HETATM	2860	O	HOH	103	61.679	22.463	5.705	1.00	52.66	O
HETATM	2861	O	HOH	104	77.579	33.064	16.137	1.00	47.51	O
HETATM	2862	O	HOH	105	44.253	34.815	19.536	1.00	42.37	O
HETATM	2863	O	HOH	106	45.451	48.437	27.057	1.00	38.64	O
HETATM	2864	O	HOH	107	59.592	41.005	40.036	1.00	41.25	O
HETATM	2865	O	HOH	108	72.057	60.543	20.606	1.00	36.69	O
HETATM	2866	O	HOH	109	55.706	47.432	14.991	1.00	42.24	O
HETATM	2867	O	HOH	110	62.531	31.016	25.446	1.00	42.66	O
HETATM	2868	O	HOH	111	73.718	48.291	39.771	1.00	53.04	O
HETATM	2869	O	HOH	112	83.522	36.024	30.729	1.00	43.33	O
HETATM	2870	O	HOH	113	45.028	41.039	12.802	1.00	37.34	O
HETATM	2871	O	HOH	114	69.524	61.101	18.831	1.00	49.35	O
HETATM	2872	O	HOH	115	44.452	44.556	32.827	1.00	42.61	O
HETATM	2873	O	HOH	116	54.399	50.470	15.469	1.00	48.43	O
HETATM	2874	O	HOH	117	61.680	63.886	35.352	1.00	38.29	O
HETATM	2875	O	HOH	118	77.475	37.083	32.225	1.00	42.79	O
HETATM	2876	O	HOH	119	53.086	57.730	38.200	1.00	44.72	O
HETATM	2877	O	HOH	120	79.877	44.361	4.154	1.00	44.06	O
HETATM	2878	O	HOH	121	57.773	49.349	44.295	1.00	43.42	O
HETATM	2879	O	HOH	122	81.021	37.925	24.041	1.00	40.18	O
HETATM	2880	O	HOH	123	92.237	46.682	19.335	1.00	49.83	O
HETATM	2881	O	HOH	124	80.220	47.967	11.064	1.00	40.72	O
HETATM	2882	O	HOH	125	73.280	38.459	40.030	1.00	48.09	O
HETATM	2883	O	HOH	126	75.038	35.191	27.031	1.00	35.93	O
HETATM	2884	O	HOH	127	54.075	73.213	39.117	1.00	50.72	O
HETATM	2885	O	HOH	128	53.079	51.663	12.707	1.00	36.75	O
HETATM	2886	O	HOH	129	60.212	50.703	45.884	1.00	49.07	O
HETATM	2887	O	HOH	130	85.493	38.286	29.721	1.00	45.03	O
HETATM	2888	O	HOH	131	72.246	32.952	26.073	1.00	44.35	O

TABLE 3

HETATM	2889	O	HOH	132	74.333	61.925	18.775	1.00	48.91	O
HETATM	2890	O	HOH	133	78.475	36.361	24.540	1.00	37.31	O
HETATM	2891	O	HOH	134	70.535	25.345	24.416	1.00	53.34	O
HETATM	2892	O	HOH	135	81.081	38.943	20.640	1.00	56.12	O
HETATM	2893	O	HOH	136	60.987	73.452	38.941	1.00	44.96	O
HETATM	2894	O	HOH	137	72.007	45.634	46.667	1.00	47.04	O
HETATM	2895	O	HOH	138	54.881	54.255	40.087	1.00	47.22	O
HETATM	2896	O	HOH	139	64.127	73.162	32.500	1.00	39.03	O
HETATM	2897	O	HOH	140	91.015	51.135	35.563	1.00	54.84	O
HETATM	2898	O	HOH	141	44.237	42.950	15.139	1.00	48.61	O
HETATM	2899	O	HOH	142	84.958	38.682	22.430	1.00	41.83	O
HETATM	2900	O	HOH	143	58.380	41.590	5.816	1.00	48.19	O
HETATM	2901	O	HOH	144	83.941	42.401	9.407	1.00	45.78	O
HETATM	2902	O	HOH	145	48.035	32.860	14.382	1.00	49.29	O
HETATM	2903	O	HOH	146	62.470	25.629	24.500	1.00	47.15	O
HETATM	2904	O	HOH	147	65.188	30.631	26.633	1.00	37.87	O
HETATM	2905	O	HOH	148	77.128	50.319	38.016	1.00	50.84	O
HETATM	2906	O	HOH	149	42.757	43.332	23.225	1.00	33.93	O
HETATM	2907	O	HOH	150	58.953	59.302	30.126	1.00	39.39	O
HETATM	2908	O	HOH	151	55.806	76.784	37.029	1.00	43.89	O
HETATM	2909	O	HOH	152	90.603	36.990	30.793	1.00	49.14	O
HETATM	2910	O	HOH	153	73.243	28.912	13.776	1.00	44.78	O
HETATM	2911	O	HOH	154	67.670	43.878	49.116	1.00	67.50	O
HETATM	2912	O	HOH	155	65.834	40.753	2.745	1.00	47.30	O
HETATM	2913	O	HOH	156	73.843	26.459	21.225	1.00	51.06	O
HETATM	2914	O	HOH	157	47.543	41.292	37.139	1.00	43.81	O
HETATM	2915	O	HOH	158	68.949	44.995	46.463	1.00	50.27	O
HETATM	2916	O	HOH	159	65.492	48.526	5.504	1.00	49.51	O
HETATM	2917	O	HOH	160	61.797	59.722	40.006	1.00	48.68	O
HETATM	2918	O	HOH	161	55.273	30.697	8.635	1.00	52.97	O
HETATM	2919	O	HOH	162	50.769	46.331	39.662	1.00	54.24	O
HETATM	2920	O	HOH	163	55.705	37.312	5.362	1.00	48.34	O
HETATM	2921	O	HOH	164	71.788	35.831	6.649	1.00	44.94	O
HETATM	2922	O	HOH	165	56.757	27.304	17.057	1.00	47.57	O
HETATM	2923	O	HOH	166	65.426	40.295	46.540	1.00	43.83	O
HETATM	2924	O	HOH	167	55.456	40.561	4.913	1.00	53.90	O
HETATM	2925	O	HOH	168	66.954	59.058	38.463	1.00	50.46	O
HETATM	2926	O	HOH	169	71.615	66.882	31.700	1.00	48.78	O
HETATM	2927	O	HOH	170	73.024	64.238	30.477	1.00	52.09	O
HETATM	2928	O	HOH	171	64.066	49.499	51.024	1.00	64.01	O
HETATM	2929	O	HOH	172	53.222	41.567	6.859	1.00	49.28	O
HETATM	2930	O	HOH	173	70.234	41.586	-4.830	1.00	59.58	O
HETATM	2931	O	HOH	174	66.709	49.280	-8.054	1.00	53.26	O
HETATM	2932	O	HOH	175	61.589	53.016	-3.167	1.00	53.96	O
HETATM	2933	O	HOH	176	66.692	71.708	31.475	1.00	48.45	O
HETATM	2934	O	HOH	177	71.233	53.697	43.927	1.00	52.05	O
HETATM	2935	O	HOH	178	72.743	64.308	17.573	1.00	54.16	O
HETATM	2936	O	HOH	179	89.336	53.769	35.871	1.00	53.70	O
HETATM	2937	O	HOH	180	54.353	46.276	17.782	1.00	54.59	O
HETATM	2938	O	HOH	181	68.022	31.001	25.937	1.00	44.50	O
HETATM	2939	O	HOH	182	52.980	29.445	10.465	1.00	50.22	O
HETATM	2940	O	HOH	183	56.686	28.215	9.903	1.00	56.33	O
HETATM	2941	O	HOH	184	77.977	49.876	10.573	1.00	53.98	O
HETATM	2942	O	HOH	185	82.562	49.900	11.756	1.00	57.59	O
HETATM	2943	O	HOH	186	81.326	47.021	8.192	1.00	51.32	O
HETATM	2944	O	HOH	187	76.430	51.542	-3.718	1.00	42.16	O
HETATM	2945	O	HOH	188	75.167	53.201	-1.226	1.00	44.07	O



HETATM	2946	O	HOH	189	62.348	54.827	1.013	1.00	51.43	O
HETATM	2947	O	HOH	190	59.995	64.398	17.439	1.00	60.65	O
HETATM	2948	O	HOH	191	97.267	51.029	39.970	1.00	58.50	O
HETATM	2949	O	HOH	192	97.537	47.953	39.149	1.00	64.57	O
HETATM	2950	O	HOH	193	93.132	47.026	37.250	1.00	46.96	O
CONNECT	202	2538								
CONNECT	1536	1537								
CONNECT	1537	1536	1538	1540						
CONNECT	1538	1537	1539							
CONNECT	1539	1538	1542							
CONNECT	1540	1537	1541							
CONNECT	1541	1540								
CONNECT	1542	1539								
CONNECT	2538	202								
CONNECT	2712	2713	2714	2715	2716					
CONNECT	2713	2712								
CONNECT	2714	2712								
CONNECT	2715	2712								
CONNECT	2716	2712	2717							
CONNECT	2717	2716	2718							
CONNECT	2718	2717	2719	2720						
CONNECT	2719	2718	2724							
CONNECT	2720	2718	2721	2722						
CONNECT	2721	2720								
CONNECT	2722	2720	2723	2724						
CONNECT	2723	2722								
CONNECT	2724	2719	2722	2725						
CONNECT	2725	2724	2726	2734						
CONNECT	2726	2725	2727							
CONNECT	2727	2726	2728							
CONNECT	2728	2727	2729	2734						
CONNECT	2729	2728	2730	2731						
CONNECT	2730	2729								
CONNECT	2731	2729	2732							
CONNECT	2732	2731	2733							
CONNECT	2733	2732	2734							
CONNECT	2734	2725	2728	2733						
CONNECT	2735	2750	2752	2753						
CONNECT	2736	2737	2751							
CONNECT	2737	2736	2738	2743						
CONNECT	2738	2737	2739							
CONNECT	2739	2738	2740							
CONNECT	2740	2739	2756	2757						
CONNECT	2741	2746								
CONNECT	2742	2754								
CONNECT	2743	2737								
CONNECT	2744	2745	2753							
CONNECT	2745	2744	2746	2750						
CONNECT	2746	2741	2745	2747						
CONNECT	2747	2746	2748	2754						
CONNECT	2748	2747	2749	2751						
CONNECT	2749	2748	2750	2755						
CONNECT	2750	2735	2745	2749						
CONNECT	2751	2736	2748							
CONNECT	2752	2735								
CONNECT	2753	2735	2744							
CONNECT	2754	2742	2747							

CONECT 2755 2749

CONECT 2756 2740

CONECT 2757 2740

MASTER	520	0	4	14	18	0	0	6	2949	1	55	39
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END

Figure 12

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TABLE 3

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HEADER      OXIDOREDUCTASE                      08-AUG-02   1MEI
TITLE       INOSINE MONOPHOSPHATE DEHYDROGENASE (IMPDH) FROM
TITLE       2 TRITRICHOMONAS FOETUS WITH XMP AND MYCOPHENOLIC ACID BOUND
COMPND      MOL_ID: 1;
COMPND      2 MOLECULE: INOSINE-5'-MONOPHOSPHATE DEHYDROGENASE;
COMPND      3 CHAIN: A;
COMPND      4 SYNONYM: IMP DEHYDROGENASE, IMPDH;
COMPND      5 EC: 1.1.1.205;
COMPND      6 ENGINEERED: YES
SOURCE      MOL_ID: 1;
SOURCE      2 ORGANISM_SCIENTIFIC: TRITRICHOMONAS FOETUS;
SOURCE      3 GENE: IMPDH;
SOURCE      4 EXPRESSION_SYSTEM: ESCHERICHIA COLI;
SOURCE      5 EXPRESSION_SYSTEM_COMMON: BACTERIA;
SOURCE      6 EXPRESSION_SYSTEM_STRAIN: H712;
SOURCE      7 EXPRESSION_SYSTEM_VECTOR_TYPE: PLASMID;
SOURCE      8 EXPRESSION_SYSTEM_PLASMID: PBACE
KEYWDS      ALPHA BETA BARREL
EXPDTA      X-RAY DIFFRACTION
AUTHOR      G.L.PROSISE,H.LUECKE
JRNL        AUTH   G.L.PROSISE,H.LUECKE
JRNL        TITL   CRYSTAL STRUCTURE OF T. FOETUS INOSINE
JRNL        TITL 2 MONOPHOSPHATE DEHYDROGENASE IN COMPLEX WITH
JRNL        TITL 3 SUBSTRATE, COFACTOR, AND ANALOGS:STRUCTURAL BASIS
JRNL        TITL 4 FOR THE RANDOM-IN ORDERED-OUT KINETIC MECHANISM
JRNL        REF    TO BE PUBLISHED
JRNL        REFN
REMARK      1
REMARK      2
REMARK      2 RESOLUTION. 2.20 ANGSTROMS.
REMARK      3
REMARK      3 REFINEMENT.
REMARK      3   PROGRAM       : CNS 1.1
REMARK      3   AUTHORS        : BRUNGER,ADAMS,CLORE,DELANO,GROS,GROSSE-
REMARK      3                   : KUNSTLEVE,JIANG,KUSZEWSKI,NILGES, PANNU,
REMARK      3                   : READ,RICE,SIMONSON,WARREN
REMARK      3
REMARK      3 REFINEMENT TARGET : ENGH & HUBER
REMARK      3
REMARK      3 DATA USED IN REFINEMENT.
REMARK      3   RESOLUTION RANGE HIGH (ANGSTROMS) : 2.20
REMARK      3   RESOLUTION RANGE LOW  (ANGSTROMS) : 33.06
REMARK      3   DATA CUTOFF              (SIGMA(F)) : 0.000
REMARK      3   OUTLIER CUTOFF HIGH (RMS(ABS(F))) : NULL
REMARK      3   COMPLETENESS (WORKING+TEST) (%) : 99.5
REMARK      3   NUMBER OF REFLECTIONS              : 32648
REMARK      3
REMARK      3 FIT TO DATA USED IN REFINEMENT.
REMARK      3   CROSS-VALIDATION METHOD           : THROUGHOUT
REMARK      3   FREE R VALUE TEST SET SELECTION   : RANDOM
REMARK      3   R VALUE                          (WORKING SET) : 0.227
REMARK      3   FREE R VALUE                      : 0.257
REMARK      3   FREE R VALUE TEST SET SIZE (%)     : 5.200
REMARK      3   FREE R VALUE TEST SET COUNT       : 1709
REMARK      3   ESTIMATED ERROR OF FREE R VALUE   : 0.006
REMARK      3
REMARK      3 FIT IN THE HIGHEST RESOLUTION BIN.

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REMARK 3 TOTAL NUMBER OF BINS USED : 6
REMARK 3 BIN RESOLUTION RANGE HIGH (A) : 2.20
REMARK 3 BIN RESOLUTION RANGE LOW (A) : 2.34
REMARK 3 BIN COMPLETENESS (WORKING+TEST) (%) : 96.60
REMARK 3 REFLECTIONS IN BIN (WORKING SET) : 4936
REMARK 3 BIN R VALUE (WORKING SET) : 0.2710
REMARK 3 BIN FREE R VALUE : 0.2930
REMARK 3 BIN FREE R VALUE TEST SET SIZE (%) : 5.00
REMARK 3 BIN FREE R VALUE TEST SET COUNT : 259
REMARK 3 ESTIMATED ERROR OF BIN FREE R VALUE : 0.018
REMARK 3
REMARK 3 NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK 3 PROTEIN ATOMS : 2690
REMARK 3 NUCLEIC ACID ATOMS : 0
REMARK 3 HETEROGEN ATOMS : 48
REMARK 3 SOLVENT ATOMS : 180
REMARK 3
REMARK 3 B VALUES.
REMARK 3 FROM WILSON PLOT (A**2) : 27.40
REMARK 3 MEAN B VALUE (OVERALL, A**2) : 37.30
REMARK 3 OVERALL ANISOTROPIC B VALUE.
REMARK 3 B11 (A**2) : 0.00000
REMARK 3 B22 (A**2) : 0.00000
REMARK 3 B33 (A**2) : 0.00000
REMARK 3 B12 (A**2) : 0.00000
REMARK 3 B13 (A**2) : 0.00000
REMARK 3 B23 (A**2) : 0.00000
REMARK 3
REMARK 3 ESTIMATED COORDINATE ERROR.
REMARK 3 ESD FROM LUZZATI PLOT (A) : 0.27
REMARK 3 ESD FROM SIGMAA (A) : 0.23
REMARK 3 LOW RESOLUTION CUTOFF (A) : 5.00
REMARK 3
REMARK 3 CROSS-VALIDATED ESTIMATED COORDINATE ERROR.
REMARK 3 ESD FROM C-V LUZZATI PLOT (A) : 0.32
REMARK 3 ESD FROM C-V SIGMAA (A) : 0.28
REMARK 3
REMARK 3 RMS DEVIATIONS FROM IDEAL VALUES.
REMARK 3 BOND LENGTHS (A) : 0.006
REMARK 3 BOND ANGLES (DEGREES) : 1.20
REMARK 3 DIHEDRAL ANGLES (DEGREES) : 22.50
REMARK 3 IMPROPER ANGLES (DEGREES) : 0.68
REMARK 3
REMARK 3 ISOTROPIC THERMAL MODEL : RESTRAINED
REMARK 3
REMARK 3 ISOTROPIC THERMAL FACTOR RESTRAINTS. RMS SIGMA
REMARK 3 MAIN-CHAIN BOND (A**2) : 1.230 ; 1.500
REMARK 3 MAIN-CHAIN ANGLE (A**2) : 2.190 ; 2.000
REMARK 3 SIDE-CHAIN BOND (A**2) : 1.610 ; 2.000
REMARK 3 SIDE-CHAIN ANGLE (A**2) : 2.520 ; 2.500
REMARK 3
REMARK 3 BULK SOLVENT MODELING.
REMARK 3 METHOD USED : FLAT MODEL
REMARK 3 KSOL : 0.34
REMARK 3 BSOL : 35.45
REMARK 3
REMARK 3 NCS MODEL : NULL

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REMARK 3
REMARK 3 NCS RESTRAINTS. RMS SIGMA/WEIGHT
REMARK 3 GROUP 1 POSITIONAL (A) : NULL ; NULL
REMARK 3 GROUP 1 B-FACTOR (A**2) : NULL ; NULL
REMARK 3
REMARK 3 PARAMETER FILE 1 : PROTEIN_REP.PARAM
REMARK 3 PARAMETER FILE 2 : PARAM.GNSOL
REMARK 3 PARAMETER FILE 3 : CIS_PEPTIDE.PARAM
REMARK 3 PARAMETER FILE 4 : MPA.PAR
REMARK 3 PARAMETER FILE 5 : XMP.PAR
REMARK 3 PARAMETER FILE 6 : NULL
REMARK 3 TOPOLOGY FILE 1 : PROTEIN.TOP
REMARK 3 TOPOLOGY FILE 2 : XMP.TOP
REMARK 3 TOPOLOGY FILE 3 : MPA.TOP
REMARK 3 TOPOLOGY FILE 4 : K.TOP
REMARK 3 TOPOLOGY FILE 5 : TOPH.GNSOL
REMARK 3 TOPOLOGY FILE 6 : NULL
REMARK 3
REMARK 3 OTHER REFINEMENT REMARKS: NULL
REMARK 4
REMARK 4 1MEI COMPLIES WITH FORMAT V. 2.3, 09-JULY-1998
REMARK 100
REMARK 100 THIS ENTRY HAS BEEN PROCESSED BY RCSB ON 16-AUG-2002.
REMARK 100 THE RCSB ID CODE IS RCSB016853.
REMARK 200
REMARK 200 EXPERIMENTAL DETAILS
REMARK 200 EXPERIMENT TYPE : X-RAY DIFFRACTION
REMARK 200 DATE OF DATA COLLECTION : 11-APR-2001
REMARK 200 TEMPERATURE (KELVIN) : 100.0
REMARK 200 PH : 7.50
REMARK 200 NUMBER OF CRYSTALS USED : 1
REMARK 200
REMARK 200 SYNCHROTRON (Y/N) : Y
REMARK 200 RADIATION SOURCE : SSRL
REMARK 200 BEAMLINE : 9-1
REMARK 200 X-RAY GENERATOR MODEL : NULL
REMARK 200 MONOCHROMATIC OR LAUE (M/L) : M
REMARK 200 WAVELENGTH OR RANGE (A) : 0.97
REMARK 200 MONOCHROMATOR : NULL
REMARK 200 OPTICS : NULL
REMARK 200
REMARK 200 DETECTOR TYPE : IMAGE PLATE
REMARK 200 DETECTOR MANUFACTURER : MARRESEARCH
REMARK 200 INTENSITY-INTEGRATION SOFTWARE : DENZO
REMARK 200 DATA SCALING SOFTWARE : SCALEPACK
REMARK 200
REMARK 200 NUMBER OF UNIQUE REFLECTIONS : 32815
REMARK 200 RESOLUTION RANGE HIGH (A) : 2.200
REMARK 200 RESOLUTION RANGE LOW (A) : 99.000
REMARK 200 REJECTION CRITERIA (SIGMA(I)) : NULL
REMARK 200
REMARK 200 OVERALL.
REMARK 200 COMPLETENESS FOR RANGE (%) : 99.5
REMARK 200 DATA REDUNDANCY : 4.700
REMARK 200 R MERGE (I) : 0.06600
REMARK 200 R SYM (I) : NULL
REMARK 200 <I/SIGMA(I)> FOR THE DATA SET : 21.4000

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REMARK 200  
 REMARK 200 IN THE HIGHEST RESOLUTION SHELL.  
 REMARK 200 HIGHEST RESOLUTION SHELL, RANGE HIGH (A) : 2.20  
 REMARK 200 HIGHEST RESOLUTION SHELL, RANGE LOW (A) : 2.24  
 REMARK 200 COMPLETENESS FOR SHELL (%) : 98.7  
 REMARK 200 DATA REDUNDANCY IN SHELL : NULL  
 REMARK 200 R MERGE FOR SHELL (I) : 0.50000  
 REMARK 200 R SYM FOR SHELL (I) : NULL  
 REMARK 200 <I/SIGMA(I)> FOR SHELL : 2.900  
 REMARK 200  
 REMARK 200 DIFFRACTION PROTOCOL: SINGLE WAVELENGTH  
 REMARK 200 METHOD USED TO DETERMINE THE STRUCTURE: FOURIER SYNTHESIS  
 REMARK 200 SOFTWARE USED: CNS  
 REMARK 200 STARTING MODEL: PDB ENTRY 1AK5  
 REMARK 200  
 REMARK 200 REMARK: NULL  
 REMARK 280  
 REMARK 280 CRYSTAL  
 REMARK 280 SOLVENT CONTENT, VS (%): NULL  
 REMARK 280 MATTHEWS COEFFICIENT, VM (ANGSTROMS\*\*3/DA): NULL  
 REMARK 280  
 REMARK 280 CRYSTALLIZATION CONDITIONS: SODIUM MALONATE, TRIS, 2-  
 REMARK 280 MERCAPTOETHANOL, EDTA, GLYCEROL  
 REMARK 290  
 REMARK 290 CRYSTALLOGRAPHIC SYMMETRY  
 REMARK 290 SYMMETRY OPERATORS FOR SPACE GROUP: P 4 3 2  
 REMARK 290  

REMARK 290	SYMOP	SYMMETRY
REMARK 290	NNNMMM	OPERATOR
REMARK 290	1555	X,Y,Z
REMARK 290	2555	-X,-Y,Z
REMARK 290	3555	-X,Y,-Z
REMARK 290	4555	X,-Y,-Z
REMARK 290	5555	Z,X,Y
REMARK 290	6555	Z,-X,-Y
REMARK 290	7555	-Z,-X,Y
REMARK 290	8555	-Z,X,-Y
REMARK 290	9555	Y,Z,X
REMARK 290	10555	-Y,Z,-X
REMARK 290	11555	Y,-Z,-X
REMARK 290	12555	-Y,-Z,X
REMARK 290	13555	Y,X,-Z
REMARK 290	14555	-Y,-X,-Z
REMARK 290	15555	Y,-X,Z
REMARK 290	16555	-Y,X,Z
REMARK 290	17555	X,Z,-Y
REMARK 290	18555	-X,Z,Y
REMARK 290	19555	-X,-Z,-Y
REMARK 290	20555	X,-Z,Y
REMARK 290	21555	Z,Y,-X
REMARK 290	22555	Z,-Y,X
REMARK 290	23555	-Z,Y,X
REMARK 290	24555	-Z,-Y,-X

 REMARK 290  
 REMARK 290 WHERE NNN -> OPERATOR NUMBER  
 REMARK 290 MMM -> TRANSLATION VECTOR  
 REMARK 290

REMARK 290 CRYSTALLOGRAPHIC SYMMETRY TRANSFORMATIONS  
REMARK 290 THE FOLLOWING TRANSFORMATIONS OPERATE ON THE ATOM/HETATM  
REMARK 290 RECORDS IN THIS ENTRY TO PRODUCE CRYSTALLOGRAPHICALLY  
REMARK 290 RELATED MOLECULES.

REMARK 290	SMTRY1	1	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	1	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY3	1	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	2	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	2	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY3	2	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	3	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	3	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY3	3	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	4	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	4	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY3	4	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	5	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY2	5	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	5	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY1	6	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY2	6	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	6	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	7	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY2	7	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	7	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY1	8	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY2	8	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	8	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	9	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	9	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	9	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	10	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	10	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	10	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	11	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	11	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY3	11	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	12	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	12	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY3	12	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	13	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	13	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	13	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	14	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	14	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	14	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	15	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	15	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	15	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	16	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	16	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	16	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	17	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	17	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	17	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	18	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	18	0.000000	0.000000	1.000000	0.000000

REMARK 290	SMTRY3	18	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY1	19	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	19	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY3	19	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	20	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	20	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY3	20	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY1	21	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY2	21	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY3	21	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	22	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY2	22	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY3	22	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	23	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY2	23	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY3	23	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	24	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY2	24	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY3	24	-1.000000	0.000000	0.000000	0.000000

REMARK 290

REMARK 290 REMARK: NULL

REMARK 300

REMARK 300 BIOMOLECULE: 1

REMARK 300 THIS ENTRY CONTAINS THE CRYSTALLOGRAPHIC ASYMMETRIC UNIT

REMARK 300 WHICH CONSISTS OF 1 CHAIN(S). SEE REMARK 350 FOR

REMARK 300 INFORMATION ON GENERATING THE BIOLOGICAL MOLECULE(S).

REMARK 350

REMARK 350 GENERATING THE BIOMOLECULE

REMARK 350 COORDINATES FOR A COMPLETE MULTIMER REPRESENTING THE KNOWN

REMARK 350 BIOLOGICALLY SIGNIFICANT OLIGOMERIZATION STATE OF THE

REMARK 350 MOLECULE CAN BE GENERATED BY APPLYING BIOMT TRANSFORMATIONS

REMARK 350 GIVEN BELOW. BOTH NON-CRYSTALLOGRAPHIC AND

REMARK 350 CRYSTALLOGRAPHIC OPERATIONS ARE GIVEN.

REMARK 350

REMARK 350 BIOMOLECULE: 1

REMARK 350 APPLY THE FOLLOWING TO CHAINS: A

REMARK 350	BIOMT1	1	1.000000	0.000000	0.000000	0.000000
REMARK 350	BIOMT2	1	0.000000	1.000000	0.000000	0.000000
REMARK 350	BIOMT3	1	0.000000	0.000000	-1.000000	0.000000
REMARK 350	BIOMT1	2	-1.000000	0.000000	0.000000	155.07000
REMARK 350	BIOMT2	2	0.000000	-1.000000	0.000000	155.07000
REMARK 350	BIOMT3	2	0.000000	0.000000	1.000000	0.000000
REMARK 350	BIOMT1	3	0.000000	1.000000	0.000000	0.000000
REMARK 350	BIOMT2	3	-1.000000	0.000000	0.000000	155.07000
REMARK 350	BIOMT3	3	0.000000	0.000000	1.000000	0.000000
REMARK 350	BIOMT1	4	0.000000	-1.000000	0.000000	155.07000
REMARK 350	BIOMT2	4	1.000000	0.000000	0.000000	0.000000
REMARK 350	BIOMT3	4	0.000000	0.000000	1.000000	0.000000

REMARK 375

REMARK 375 SPECIAL POSITION

REMARK 375 THE FOLLOWING ATOMS ARE FOUND TO BE WITHIN 0.15 ANGSTROMS

REMARK 375 OF A SYMMETRY RELATED ATOM AND ARE ASSUMED TO BE ON SPECIAL

REMARK 375 POSITIONS.

REMARK 375

REMARK 375 ATOM RES CSSEQI

REMARK 375 HOH 131 LIES ON A SPECIAL POSITION.

REMARK 465



REMARK 465 MISSING RESIDUES  
REMARK 465 THE FOLLOWING RESIDUES WERE NOT LOCATED IN THE  
REMARK 465 EXPERIMENT. (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN  
REMARK 465 IDENTIFIER; SSSEQ=SEQUENCE NUMBER; I=INSERTION CODE.)  
REMARK 465  
REMARK 465 M RES C SSSEQI  
REMARK 465 MET A 1  
REMARK 465 GLY A 102  
REMARK 465 PHE A 103  
REMARK 465 VAL A 104  
REMARK 465 VAL A 105  
REMARK 465 SER A 106  
REMARK 465 ASP A 107  
REMARK 465 SER A 108  
REMARK 465 ASN A 109  
REMARK 465 VAL A 110  
REMARK 465 LYS A 111  
REMARK 465 PRO A 112  
REMARK 465 ASP A 113  
REMARK 465 GLN A 114  
REMARK 465 THR A 115  
REMARK 465 PHE A 116  
REMARK 465 ALA A 117  
REMARK 465 ASP A 118  
REMARK 465 VAL A 119  
REMARK 465 LEU A 120  
REMARK 465 ALA A 121  
REMARK 465 ILE A 122  
REMARK 465 SER A 123  
REMARK 465 GLN A 124  
REMARK 465 ARG A 125  
REMARK 465 THR A 126  
REMARK 465 THR A 127  
REMARK 465 HIS A 128  
REMARK 465 ASN A 129  
REMARK 465 THR A 130  
REMARK 465 VAL A 131  
REMARK 465 ALA A 132  
REMARK 465 VAL A 133  
REMARK 465 THR A 134  
REMARK 465 ASP A 135  
REMARK 465 ASP A 136  
REMARK 465 GLY A 137  
REMARK 465 THR A 138  
REMARK 465 PRO A 139  
REMARK 465 HIS A 140  
REMARK 465 GLY A 141  
REMARK 465 VAL A 142  
REMARK 465 LEU A 143  
REMARK 465 LEU A 144  
REMARK 465 GLY A 145  
REMARK 465 LEU A 146  
REMARK 465 VAL A 147  
REMARK 465 THR A 148  
REMARK 465 GLN A 149  
REMARK 465 ARG A 150  
REMARK 465 ASP A 151

REMARK 465	TYR A	152
REMARK 465	PRO A	153
REMARK 465	ILE A	154
REMARK 465	ASP A	155
REMARK 465	LEU A	156
REMARK 465	THR A	157
REMARK 465	GLN A	158
REMARK 465	THR A	159
REMARK 465	GLU A	160
REMARK 465	THR A	161
REMARK 465	LYS A	162
REMARK 465	VAL A	163
REMARK 465	SER A	164
REMARK 465	ASP A	165
REMARK 465	MET A	166
REMARK 465	MET A	167
REMARK 465	THR A	168
REMARK 465	PRO A	169
REMARK 465	PHE A	170
REMARK 465	SER A	171
REMARK 465	LYS A	172
REMARK 465	LEU A	173
REMARK 465	VAL A	174
REMARK 465	THR A	175
REMARK 465	ALA A	176
REMARK 465	HIS A	177
REMARK 465	GLN A	178
REMARK 465	ASP A	179
REMARK 465	THR A	180
REMARK 465	LYS A	181
REMARK 465	LEU A	182
REMARK 465	SER A	183
REMARK 465	GLU A	184
REMARK 465	ALA A	185
REMARK 465	ASN A	186
REMARK 465	LYS A	187
REMARK 465	ILE A	188
REMARK 465	ILE A	189
REMARK 465	TRP A	190
REMARK 465	GLU A	191
REMARK 465	LYS A	192
REMARK 465	LYS A	193
REMARK 465	LEU A	194
REMARK 465	ASN A	195
REMARK 465	ALA A	196
REMARK 465	LEU A	197
REMARK 465	PRO A	198
REMARK 465	ILE A	199
REMARK 465	ILE A	200
REMARK 465	ASP A	201
REMARK 465	ASP A	202
REMARK 465	ASP A	203
REMARK 465	GLN A	204
REMARK 465	HIS A	205
REMARK 465	LEU A	206
REMARK 465	ARG A	207
REMARK 465	TYR A	208

REMARK 465	ILE A	209
REMARK 465	VAL A	210
REMARK 465	PHE A	211
REMARK 465	ARG A	212
REMARK 465	LYS A	213
REMARK 465	ASP A	214
REMARK 465	TYR A	215
REMARK 465	ASP A	216
REMARK 465	ARG A	217
REMARK 465	SER A	218
REMARK 465	GLN A	219
REMARK 465	VAL A	220
REMARK 465	CYS A	221
REMARK 465	GLN A	417
REMARK 465	ARG A	418
REMARK 465	TYR A	419
REMARK 465	ASP A	420
REMARK 465	LEU A	421
REMARK 465	GLY A	422
REMARK 465	GLY A	423
REMARK 465	LYS A	424
REMARK 465	GLN A	425
REMARK 465	LYS A	426
REMARK 465	LEU A	427
REMARK 465	VAL A	484
REMARK 465	GLU A	485
REMARK 465	GLY A	486
REMARK 465	GLY A	487
REMARK 465	ALA A	488
REMARK 465	HIS A	489
REMARK 465	ASP A	490
REMARK 465	VAL A	491
REMARK 465	ILE A	492
REMARK 465	VAL A	493
REMARK 465	LYS A	494
REMARK 465	ASP A	495
REMARK 465	ARG A	496
REMARK 465	ILE A	497
REMARK 465	ASN A	498
REMARK 465	ASP A	499
REMARK 465	TYR A	500
REMARK 465	HIS A	501
REMARK 465	PRO A	502
REMARK 465	LYS A	503

REMARK 500

REMARK 500 GEOMETRY AND STEREOCHEMISTRY

REMARK 500 SUBTOPIC: CLOSE CONTACTS IN SAME ASYMMETRIC UNIT

REMARK 500

REMARK 500 THE FOLLOWING ATOMS ARE IN CLOSE CONTACT.

REMARK 500

REMARK 500	ATM1	RES C	SSEQI	ATM2	RES C	SSEQI
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REMARK 500	O	GLY A	20	K	K	A	900
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2.12

REMARK 500

REMARK 500 GEOMETRY AND STEREOCHEMISTRY

REMARK 500 SUBTOPIC: COVALENT BOND LENGTHS

REMARK 500

REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES

REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE  
 REMARK 500 THAN 6\*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN  
 REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).  
 REMARK 500  
 REMARK 500 STANDARD TABLE:  
 REMARK 500 FORMAT: (10X,I3,1X,2(A3,1X,A1,I4,A1,1X,A4,3X),F6.3).  
 REMARK 500  
 REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991  
 REMARK 500  

REMARK 500	M	RES	CSSEQI	ATM1		RES	CSSEQI	ATM2		DEVIATION
REMARK 500		MET A	379	CE		MET A	379	SD		0.037

 REMARK 500  
 REMARK 500 GEOMETRY AND STEREOCHEMISTRY  
 REMARK 500 SUBTOPIC: COVALENT BOND ANGLES  
 REMARK 500  
 REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES  
 REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE  
 REMARK 500 THAN 6\*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN  
 REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).  
 REMARK 500  
 REMARK 500 STANDARD TABLE:  
 REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,3(1X,A4,2X),12X,F5.1)  
 REMARK 500  
 REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991  
 REMARK 500  

REMARK 500	M	RES	CSSEQI	ATM1		ATM2		ATM3		
REMARK 500		ILE A	27	N	-	CA	-	C		ANGL. DEV. = -7.8 DEGREES
REMARK 500		GLN A	45	N	-	CA	-	C		ANGL. DEV. = -7.7 DEGREES
REMARK 500		SER A	63	N	-	CA	-	C		ANGL. DEV. = 8.3 DEGREES
REMARK 500		PHE A	266	N	-	CA	-	C		ANGL. DEV. = -7.2 DEGREES
REMARK 500		GLY A	312	N	-	CA	-	C		ANGL. DEV. = 7.6 DEGREES
REMARK 500		THR A	349	N	-	CA	-	C		ANGL. DEV. = 7.3 DEGREES
REMARK 500		PRO A	391	N	-	CA	-	C		ANGL. DEV. = 7.3 DEGREES
REMARK 500		LYS A	394	N	-	CA	-	C		ANGL. DEV. = -7.8 DEGREES
REMARK 500		LYS A	472	N	-	CA	-	C		ANGL. DEV. = 8.3 DEGREES
REMARK 500		LYS A	474	N	-	CA	-	C		ANGL. DEV. = -8.6 DEGREES
REMARK 500		LEU A	477	N	-	CA	-	C		ANGL. DEV. = -7.6 DEGREES

 REMARK 500  
 REMARK 500 GEOMETRY AND STEREOCHEMISTRY  
 REMARK 500 SUBTOPIC: TORSION ANGLES  
 REMARK 500  
 REMARK 500 TORSION ANGLES OUTSIDE THE EXPECTED RAMACHANDRAN REGIONS:  
 REMARK 500 (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN IDENTIFIER;  
 REMARK 500 SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).  
 REMARK 500  
 REMARK 500 STANDARD TABLE:  
 REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,4X,F7.2,3X,F7.2)  
 REMARK 500  

REMARK 500	M	RES	CSSEQI		PSI		PHI
REMARK 500		GLN A	324		-106.74		-152.50

 REMARK 900  
 REMARK 900 RELATED ENTRIES  
 REMARK 900 RELATED ID: 1AK5 RELATED DB: PDB  
 REMARK 900 INOSINE MONOPHOSPHATE DEHYDROGENASE (IMPDH) FROM  
 REMARK 900 TRITRICHOMONAS FOETUS  
 REMARK 900 RELATED ID: 1ME7 RELATED DB: PDB  
 REMARK 900 1ME7 CONTAINS THE SAME PROTEIN WITH RVP AND MOA BOUND

REMARK 900 RELATED ID: 1ME8 RELATED DB: PDB  
 REMARK 900 1ME8 CONTAINS THE SAME PROTEIN WITH RVP BOUND  
 REMARK 900 RELATED ID: 1ME9 RELATED DB: PDB  
 REMARK 900 1ME9 CONTAINS THE SAME PROTEIN WITH IMP BOUND  
 REMARK 900 RELATED ID: 1MEH RELATED DB: PDB  
 REMARK 900 1MEH CONTAINS THE SAME PROTEIN WITH IMP AND MOA BOUND  
 REMARK 900 RELATED ID: 1MEW RELATED DB: PDB  
 REMARK 900 1MEW CONTAINS THE SAME PROTEIN WITH XMP AND NAD BOUND

DBREF	1MEI	A	1	503	SWS	P50097	IMDH	TRIFO	1	503
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SEQRES 1 A 503 MET ALA LYS TYR TYR ASN GLU PRO CYS HIS THR PHE ASN  
 SEQRES 2 A 503 GLU TYR LEU LEU ILE PRO GLY LEU SER THR VAL ASP CYS  
 SEQRES 3 A 503 ILE PRO SER ASN VAL ASN LEU SER THR PRO LEU VAL LYS  
 SEQRES 4 A 503 PHE GLN LYS GLY GLN GLN SER GLU ILE ASN LEU LYS ILE  
 SEQRES 5 A 503 PRO LEU VAL SER ALA ILE MET GLN SER VAL SER GLY GLU  
 SEQRES 6 A 503 LYS MET ALA ILE ALA LEU ALA ARG GLU GLY GLY ILE SER  
 SEQRES 7 A 503 PHE ILE PHE GLY SER GLN SER ILE GLU SER GLN ALA ALA  
 SEQRES 8 A 503 MET VAL HIS ALA VAL LYS ASN PHE LYS ALA GLY PHE VAL  
 SEQRES 9 A 503 VAL SER ASP SER ASN VAL LYS PRO ASP GLN THR PHE ALA  
 SEQRES 10 A 503 ASP VAL LEU ALA ILE SER GLN ARG THR THR HIS ASN THR  
 SEQRES 11 A 503 VAL ALA VAL THR ASP ASP GLY THR PRO HIS GLY VAL LEU  
 SEQRES 12 A 503 LEU GLY LEU VAL THR GLN ARG ASP TYR PRO ILE ASP LEU  
 SEQRES 13 A 503 THR GLN THR GLU THR LYS VAL SER ASP MET MET THR PRO  
 SEQRES 14 A 503 PHE SER LYS LEU VAL THR ALA HIS GLN ASP THR LYS LEU  
 SEQRES 15 A 503 SER GLU ALA ASN LYS ILE ILE TRP GLU LYS LYS LEU ASN  
 SEQRES 16 A 503 ALA LEU PRO ILE ILE ASP ASP ASP GLN HIS LEU ARG TYR  
 SEQRES 17 A 503 ILE VAL PHE ARG LYS ASP TYR ASP ARG SER GLN VAL CYS  
 SEQRES 18 A 503 HIS ASN GLU LEU VAL ASP SER GLN LYS ARG TYR LEU VAL  
 SEQRES 19 A 503 GLY ALA GLY ILE ASN THR ARG ASP PHE ARG GLU ARG VAL  
 SEQRES 20 A 503 PRO ALA LEU VAL GLU ALA GLY ALA ASP VAL LEU CYS ILE  
 SEQRES 21 A 503 ASP SER SER ASP GLY PHE SER GLU TRP GLN LYS ILE THR  
 SEQRES 22 A 503 ILE GLY TRP ILE ARG GLU LYS TYR GLY ASP LYS VAL LYS  
 SEQRES 23 A 503 VAL GLY ALA GLY ASN ILE VAL ASP GLY GLU GLY PHE ARG  
 SEQRES 24 A 503 TYR LEU ALA ASP ALA GLY ALA ASP PHE ILE LYS ILE GLY  
 SEQRES 25 A 503 ILE GLY GLY GLY SER ILE CYS ILE THR ARG GLU GLN LYS  
 SEQRES 26 A 503 GLY ILE GLY ARG GLY GLN ALA THR ALA VAL ILE ASP VAL  
 SEQRES 27 A 503 VAL ALA GLU ARG ASN LYS TYR PHE GLU GLU THR GLY ILE  
 SEQRES 28 A 503 TYR ILE PRO VAL CYS SER ASP GLY GLY ILE VAL TYR ASP  
 SEQRES 29 A 503 TYR HIS MET THR LEU ALA LEU ALA MET GLY ALA ASP PHE  
 SEQRES 30 A 503 ILE MET LEU GLY ARG TYR PHE ALA ARG PHE GLU GLU SER  
 SEQRES 31 A 503 PRO THR ARG LYS VAL THR ILE ASN GLY SER VAL MET LYS  
 SEQRES 32 A 503 GLU TYR TRP GLY GLU GLY SER SER ARG ALA ARG ASN TRP  
 SEQRES 33 A 503 GLN ARG TYR ASP LEU GLY GLY LYS GLN LYS LEU SER PHE  
 SEQRES 34 A 503 GLU GLU GLY VAL ASP SER TYR VAL PRO TYR ALA GLY LYS  
 SEQRES 35 A 503 LEU LYS ASP ASN VAL GLU ALA SER LEU ASN LYS VAL LYS  
 SEQRES 36 A 503 SER THR MET CYS ASN CYS GLY ALA LEU THR ILE PRO GLN  
 SEQRES 37 A 503 LEU GLN SER LYS ALA LYS ILE THR LEU VAL SER SER VAL  
 SEQRES 38 A 503 SER ILE VAL GLU GLY GLY ALA HIS ASP VAL ILE VAL LYS  
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TABLE 4

ATOM	13	CE	LYS	A	3	61.981	68.154	37.977	1.00	38.58	C
ATOM	14	NZ	LYS	A	3	63.081	69.118	38.256	1.00	40.73	N
ATOM	15	N	TYR	A	4	61.396	72.809	36.424	1.00	27.63	N
ATOM	16	CA	TYR	A	4	62.589	73.060	35.617	1.00	27.84	C
ATOM	17	C	TYR	A	4	63.789	72.257	36.120	1.00	29.05	C
ATOM	18	O	TYR	A	4	63.729	71.620	37.168	1.00	28.98	O
ATOM	19	CB	TYR	A	4	62.906	74.559	35.635	1.00	26.14	C
ATOM	20	CG	TYR	A	4	61.816	75.386	34.994	1.00	26.21	C
ATOM	21	CD1	TYR	A	4	61.746	75.528	33.607	1.00	24.20	C
ATOM	22	CD2	TYR	A	4	60.819	75.981	35.769	1.00	26.83	C
ATOM	23	CE1	TYR	A	4	60.707	76.243	33.007	1.00	24.96	C
ATOM	24	CE2	TYR	A	4	59.773	76.699	35.177	1.00	26.60	C
ATOM	25	CZ	TYR	A	4	59.726	76.824	33.799	1.00	25.65	C
ATOM	26	OH	TYR	A	4	58.698	77.523	33.215	1.00	25.82	O
ATOM	27	N	TYR	A	5	64.880	72.288	35.362	1.00	30.21	N
ATOM	28	CA	TYR	A	5	66.082	71.556	35.732	1.00	31.29	C
ATOM	29	C	TYR	A	5	67.275	72.487	35.860	1.00	32.27	C
ATOM	30	O	TYR	A	5	67.313	73.551	35.241	1.00	33.48	O
ATOM	31	CB	TYR	A	5	66.370	70.467	34.700	1.00	30.15	C
ATOM	32	CG	TYR	A	5	65.246	69.467	34.568	1.00	30.45	C
ATOM	33	CD1	TYR	A	5	64.076	69.789	33.876	1.00	30.10	C
ATOM	34	CD2	TYR	A	5	65.338	68.203	35.158	1.00	29.26	C
ATOM	35	CE1	TYR	A	5	63.028	68.879	33.775	1.00	30.02	C
ATOM	36	CE2	TYR	A	5	64.298	67.289	35.064	1.00	29.82	C
ATOM	37	CZ	TYR	A	5	63.147	67.632	34.372	1.00	30.16	C
ATOM	38	OH	TYR	A	5	62.122	66.728	34.277	1.00	29.57	O
ATOM	39	N	ASN	A	6	68.249	72.079	36.667	1.00	33.12	N
ATOM	40	CA	ASN	A	6	69.445	72.880	36.903	1.00	34.04	C
ATOM	41	C	ASN	A	6	70.421	72.883	35.732	1.00	33.43	C
ATOM	42	O	ASN	A	6	71.190	73.827	35.569	1.00	34.04	O
ATOM	43	CB	ASN	A	6	70.158	72.380	38.162	1.00	36.54	C
ATOM	44	CG	ASN	A	6	69.322	72.563	39.417	1.00	40.37	C
ATOM	45	OD1	ASN	A	6	69.335	71.716	40.315	1.00	42.93	O
ATOM	46	ND2	ASN	A	6	68.597	73.679	39.493	1.00	41.40	N
ATOM	47	N	GLU	A	7	70.388	71.839	34.912	1.00	32.19	N
ATOM	48	CA	GLU	A	7	71.301	71.749	33.774	1.00	30.55	C
ATOM	49	C	GLU	A	7	70.588	71.404	32.477	1.00	28.37	C
ATOM	50	O	GLU	A	7	69.563	70.724	32.483	1.00	27.97	O
ATOM	51	CB	GLU	A	7	72.365	70.671	34.030	1.00	32.84	C
ATOM	52	CG	GLU	A	7	73.323	70.926	35.203	1.00	36.46	C
ATOM	53	CD	GLU	A	7	74.235	72.121	34.978	1.00	38.59	C
ATOM	54	OE1	GLU	A	7	74.649	72.348	33.821	1.00	39.18	O
ATOM	55	OE2	GLU	A	7	74.552	72.828	35.961	1.00	41.76	O
ATOM	56	N	PRO	A	8	71.125	71.868	31.339	1.00	26.18	N
ATOM	57	CA	PRO	A	8	70.484	71.549	30.062	1.00	25.74	C
ATOM	58	C	PRO	A	8	70.830	70.098	29.736	1.00	25.66	C
ATOM	59	O	PRO	A	8	71.796	69.561	30.281	1.00	25.70	O
ATOM	60	CB	PRO	A	8	71.140	72.530	29.094	1.00	25.89	C
ATOM	61	CG	PRO	A	8	72.531	72.678	29.661	1.00	24.82	C
ATOM	62	CD	PRO	A	8	72.270	72.780	31.149	1.00	25.95	C
ATOM	63	N	CYS	A	9	70.053	69.457	28.869	1.00	25.32	N
ATOM	64	CA	CYS	A	9	70.342	68.074	28.501	1.00	25.12	C
ATOM	65	C	CYS	A	9	71.405	68.030	27.396	1.00	24.58	C
ATOM	66	O	CYS	A	9	71.599	69.009	26.674	1.00	24.57	O
ATOM	67	CB	CYS	A	9	69.058	67.354	28.064	1.00	25.98	C
ATOM	68	SG	CYS	A	9	68.140	68.110	26.701	1.00	28.89	S
ATOM	69	N	HIS	A	10	72.087	66.895	27.267	1.00	23.82	N

TABLE 4

ATOM	70	CA	HIS	A	10	73.159	66.735	26.284	1.00	22.97	C
ATOM	71	C	HIS	A	10	73.016	65.458	25.450	1.00	23.29	C
ATOM	72	O	HIS	A	10	72.389	64.491	25.886	1.00	22.16	O
ATOM	73	CB	HIS	A	10	74.505	66.695	27.013	1.00	23.38	C
ATOM	74	CG	HIS	A	10	74.767	67.892	27.874	1.00	24.01	C
ATOM	75	ND1	HIS	A	10	75.212	69.094	27.364	1.00	23.71	N
ATOM	76	CD2	HIS	A	10	74.645	68.071	29.211	1.00	23.36	C
ATOM	77	CE1	HIS	A	10	75.353	69.962	28.351	1.00	22.56	C
ATOM	78	NE2	HIS	A	10	75.015	69.366	29.481	1.00	23.59	N
ATOM	79	N	THR	A	11	73.605	65.462	24.255	1.00	23.11	N
ATOM	80	CA	THR	A	11	73.573	64.300	23.362	1.00	23.58	C
ATOM	81	C	THR	A	11	74.920	63.571	23.464	1.00	23.26	C
ATOM	82	O	THR	A	11	75.858	64.093	24.061	1.00	22.66	O
ATOM	83	CB	THR	A	11	73.360	64.719	21.889	1.00	24.09	C
ATOM	84	OG1	THR	A	11	74.439	65.562	21.475	1.00	25.91	O
ATOM	85	CG2	THR	A	11	72.049	65.480	21.727	1.00	25.24	C
ATOM	86	N	PHE	A	12	75.017	62.377	22.881	1.00	23.30	N
ATOM	87	CA	PHE	A	12	76.262	61.609	22.931	1.00	24.87	C
ATOM	88	C	PHE	A	12	77.458	62.328	22.304	1.00	26.16	C
ATOM	89	O	PHE	A	12	78.596	62.112	22.713	1.00	26.04	O
ATOM	90	CB	PHE	A	12	76.096	60.243	22.249	1.00	23.25	C
ATOM	91	CG	PHE	A	12	75.216	59.284	23.004	1.00	23.37	C
ATOM	92	CD1	PHE	A	12	75.362	59.119	24.377	1.00	22.09	C
ATOM	93	CD2	PHE	A	12	74.253	58.537	22.337	1.00	22.79	C
ATOM	94	CE1	PHE	A	12	74.560	58.223	25.078	1.00	23.40	C
ATOM	95	CE2	PHE	A	12	73.443	57.634	23.027	1.00	24.01	C
ATOM	96	CZ	PHE	A	12	73.596	57.476	24.399	1.00	22.98	C
ATOM	97	N	ASN	A	13	77.202	63.173	21.310	1.00	26.96	N
ATOM	98	CA	ASN	A	13	78.273	63.905	20.637	1.00	28.09	C
ATOM	99	C	ASN	A	13	78.998	64.901	21.533	1.00	26.75	C
ATOM	100	O	ASN	A	13	80.044	65.420	21.152	1.00	27.23	O
ATOM	101	CB	ASN	A	13	77.734	64.663	19.417	1.00	31.04	C
ATOM	102	CG	ASN	A	13	77.622	63.787	18.183	1.00	36.11	C
ATOM	103	OD1	ASN	A	13	78.522	63.000	17.883	1.00	39.98	O
ATOM	104	ND2	ASN	A	13	76.526	63.934	17.448	1.00	38.57	N
ATOM	105	N	GLU	A	14	78.445	65.178	22.710	1.00	25.07	N
ATOM	106	CA	GLU	A	14	79.060	66.136	23.621	1.00	25.01	C
ATOM	107	C	GLU	A	14	79.976	65.483	24.650	1.00	25.17	C
ATOM	108	O	GLU	A	14	80.464	66.148	25.563	1.00	26.57	O
ATOM	109	CB	GLU	A	14	77.976	66.937	24.348	1.00	25.02	C
ATOM	110	CG	GLU	A	14	77.000	67.638	23.420	1.00	25.34	C
ATOM	111	CD	GLU	A	14	75.926	68.401	24.169	1.00	25.36	C
ATOM	112	OE1	GLU	A	14	76.272	69.314	24.947	1.00	25.19	O
ATOM	113	OE2	GLU	A	14	74.734	68.083	23.978	1.00	26.80	O
ATOM	114	N	TYR	A	15	80.229	64.189	24.499	1.00	24.38	N
ATOM	115	CA	TYR	A	15	81.067	63.487	25.455	1.00	23.13	C
ATOM	116	C	TYR	A	15	82.248	62.754	24.856	1.00	23.75	C
ATOM	117	O	TYR	A	15	82.230	62.360	23.691	1.00	24.15	O
ATOM	118	CB	TYR	A	15	80.224	62.478	26.238	1.00	22.70	C
ATOM	119	CG	TYR	A	15	79.201	63.097	27.153	1.00	23.45	C
ATOM	120	CD1	TYR	A	15	79.519	63.416	28.474	1.00	23.71	C
ATOM	121	CD2	TYR	A	15	77.909	63.361	26.702	1.00	24.00	C
ATOM	122	CE1	TYR	A	15	78.571	63.977	29.326	1.00	25.23	C
ATOM	123	CE2	TYR	A	15	76.954	63.927	27.544	1.00	25.30	C
ATOM	124	CZ	TYR	A	15	77.288	64.231	28.851	1.00	25.69	C
ATOM	125	OH	TYR	A	15	76.342	64.793	29.680	1.00	29.22	O
ATOM	126	N	LEU	A	16	83.273	62.570	25.681	1.00	24.09	N



TABLE 4

ATOM	127	CA	LEU	A	16	84.470	61.830	25.301	1.00	24.11	C
ATOM	128	C	LEU	A	16	84.866	61.010	26.519	1.00	23.10	C
ATOM	129	O	LEU	A	16	84.525	61.360	27.649	1.00	22.07	O
ATOM	130	CB	LEU	A	16	85.625	62.767	24.922	1.00	24.98	C
ATOM	131	CG	LEU	A	16	85.590	63.480	23.569	1.00	26.50	C
ATOM	132	CD1	LEU	A	16	86.770	64.421	23.467	1.00	28.14	C
ATOM	133	CD2	LEU	A	16	85.635	62.471	22.444	1.00	28.66	C
ATOM	134	N	LEU	A	17	85.572	59.913	26.279	1.00	23.04	N
ATOM	135	CA	LEU	A	17	86.047	59.040	27.346	1.00	23.77	C
ATOM	136	C	LEU	A	17	87.512	59.362	27.630	1.00	23.70	C
ATOM	137	O	LEU	A	17	88.301	59.540	26.706	1.00	23.54	O
ATOM	138	CB	LEU	A	17	85.929	57.569	26.923	1.00	22.71	C
ATOM	139	CG	LEU	A	17	84.511	56.990	26.882	1.00	23.40	C
ATOM	140	CD1	LEU	A	17	84.480	55.739	26.022	1.00	23.07	C
ATOM	141	CD2	LEU	A	17	84.047	56.698	28.301	1.00	21.29	C
ATOM	142	N	ILE	A	18	87.860	59.456	28.909	1.00	24.51	N
ATOM	143	CA	ILE	A	18	89.236	59.720	29.313	1.00	24.55	C
ATOM	144	C	ILE	A	18	89.803	58.357	29.705	1.00	24.94	C
ATOM	145	O	ILE	A	18	89.236	57.670	30.545	1.00	25.77	O
ATOM	146	CB	ILE	A	18	89.279	60.687	30.509	1.00	24.40	C
ATOM	147	CG1	ILE	A	18	88.798	62.071	30.054	1.00	25.23	C
ATOM	148	CG2	ILE	A	18	90.696	60.750	31.089	1.00	24.00	C
ATOM	149	CD1	ILE	A	18	88.754	63.115	31.149	1.00	26.14	C
ATOM	150	N	PRO	A	19	90.921	57.942	29.089	1.00	24.65	N
ATOM	151	CA	PRO	A	19	91.519	56.640	29.402	1.00	26.08	C
ATOM	152	C	PRO	A	19	91.842	56.372	30.868	1.00	26.01	C
ATOM	153	O	PRO	A	19	92.120	57.288	31.646	1.00	25.83	O
ATOM	154	CB	PRO	A	19	92.787	56.610	28.533	1.00	26.14	C
ATOM	155	CG	PRO	A	19	92.431	57.503	27.375	1.00	26.01	C
ATOM	156	CD	PRO	A	19	91.708	58.646	28.061	1.00	24.66	C
ATOM	157	N	GLY	A	20	91.792	55.092	31.221	1.00	25.78	N
ATOM	158	CA	GLY	A	20	92.118	54.654	32.564	1.00	25.89	C
ATOM	159	C	GLY	A	20	93.331	53.748	32.425	1.00	26.31	C
ATOM	160	O	GLY	A	20	93.940	53.671	31.353	1.00	26.09	O
ATOM	161	N	LEU	A	21	93.692	53.052	33.492	1.00	27.91	N
ATOM	162	CA	LEU	A	21	94.842	52.161	33.436	1.00	28.51	C
ATOM	163	C	LEU	A	21	94.522	50.917	32.626	1.00	28.22	C
ATOM	164	O	LEU	A	21	93.599	50.178	32.950	1.00	28.84	O
ATOM	165	CB	LEU	A	21	95.281	51.748	34.850	1.00	28.54	C
ATOM	166	CG	LEU	A	21	96.424	50.721	34.929	1.00	28.79	C
ATOM	167	CD1	LEU	A	21	97.661	51.272	34.230	1.00	25.50	C
ATOM	168	CD2	LEU	A	21	96.726	50.390	36.394	1.00	28.73	C
ATOM	169	N	SER	A	22	95.284	50.697	31.562	1.00	29.18	N
ATOM	170	CA	SER	A	22	95.099	49.525	30.725	1.00	30.50	C
ATOM	171	C	SER	A	22	96.101	48.467	31.171	1.00	32.47	C
ATOM	172	O	SER	A	22	97.310	48.684	31.107	1.00	31.83	O
ATOM	173	CB	SER	A	22	95.340	49.874	29.259	1.00	30.15	C
ATOM	174	OG	SER	A	22	94.432	50.858	28.813	1.00	31.65	O
ATOM	175	N	THR	A	23	95.595	47.327	31.630	1.00	35.11	N
ATOM	176	CA	THR	A	23	96.451	46.237	32.090	1.00	36.70	C
ATOM	177	C	THR	A	23	96.864	45.327	30.941	1.00	37.53	C
ATOM	178	O	THR	A	23	96.241	45.331	29.879	1.00	38.20	O
ATOM	179	CB	THR	A	23	95.741	45.392	33.155	1.00	37.23	C
ATOM	180	OG1	THR	A	23	94.462	44.985	32.660	1.00	40.43	O
ATOM	181	CG2	THR	A	23	95.552	46.191	34.429	1.00	37.20	C
ATOM	182	N	VAL	A	24	97.919	44.547	31.159	1.00	38.34	N
ATOM	183	CA	VAL	A	24	98.425	43.636	30.135	1.00	38.85	C

TABLE 4

ATOM	184	C	VAL	A	24	97.396	42.605	29.666	1.00	39.73	C
ATOM	185	O	VAL	A	24	97.401	42.203	28.499	1.00	39.77	O
ATOM	186	CB	VAL	A	24	99.700	42.886	30.625	1.00	39.23	C
ATOM	187	CG1	VAL	A	24	100.851	43.871	30.800	1.00	38.15	C
ATOM	188	CG2	VAL	A	24	99.418	42.167	31.938	1.00	38.35	C
ATOM	189	N	ASP	A	25	96.506	42.186	30.560	1.00	40.55	N
ATOM	190	CA	ASP	A	25	95.503	41.195	30.186	1.00	43.23	C
ATOM	191	C	ASP	A	25	94.328	41.733	29.370	1.00	42.88	C
ATOM	192	O	ASP	A	25	93.485	40.951	28.933	1.00	43.24	O
ATOM	193	CB	ASP	A	25	94.956	40.476	31.425	1.00	45.78	C
ATOM	194	CG	ASP	A	25	94.301	41.421	32.405	1.00	48.75	C
ATOM	195	OD1	ASP	A	25	93.333	41.010	33.083	1.00	49.75	O
ATOM	196	OD2	ASP	A	25	94.764	42.574	32.503	1.00	50.54	O
ATOM	197	N	CYS	A	26	94.257	43.045	29.150	1.00	42.32	N
ATOM	198	CA	CYS	A	26	93.137	43.581	28.377	1.00	41.35	C
ATOM	199	C	CYS	A	26	93.440	43.763	26.903	1.00	41.34	C
ATOM	200	O	CYS	A	26	94.067	44.738	26.496	1.00	41.54	O
ATOM	201	CB	CYS	A	26	92.640	44.924	28.943	1.00	39.84	C
ATOM	202	SG	CYS	A	26	90.919	45.372	28.462	1.00	36.85	S
ATOM	203	N	ILE	A	27	92.992	42.802	26.108	1.00	42.52	N
ATOM	204	CA	ILE	A	27	93.142	42.857	24.664	1.00	43.62	C
ATOM	205	C	ILE	A	27	91.725	42.630	24.152	1.00	44.10	C
ATOM	206	O	ILE	A	27	90.935	41.930	24.789	1.00	43.64	O
ATOM	207	CB	ILE	A	27	94.086	41.748	24.125	1.00	45.23	C
ATOM	208	CG1	ILE	A	27	93.613	40.374	24.601	1.00	45.47	C
ATOM	209	CG2	ILE	A	27	95.519	42.019	24.579	1.00	44.91	C
ATOM	210	CD1	ILE	A	27	94.479	39.224	24.114	1.00	47.61	C
ATOM	211	N	PRO	A	28	91.377	43.235	23.010	1.00	44.56	N
ATOM	212	CA	PRO	A	28	90.041	43.090	22.429	1.00	44.54	C
ATOM	213	C	PRO	A	28	89.474	41.673	22.450	1.00	44.69	C
ATOM	214	O	PRO	A	28	88.312	41.471	22.801	1.00	44.73	O
ATOM	215	CB	PRO	A	28	90.233	43.625	21.016	1.00	45.21	C
ATOM	216	CG	PRO	A	28	91.205	44.738	21.239	1.00	44.60	C
ATOM	217	CD	PRO	A	28	92.221	44.104	22.170	1.00	44.85	C
ATOM	218	N	SER	A	29	90.292	40.692	22.082	1.00	44.42	N
ATOM	219	CA	SER	A	29	89.835	39.307	22.048	1.00	43.86	C
ATOM	220	C	SER	A	29	89.390	38.767	23.405	1.00	42.44	C
ATOM	221	O	SER	A	29	88.605	37.821	23.468	1.00	43.23	O
ATOM	222	CB	SER	A	29	90.926	38.400	21.455	1.00	45.84	C
ATOM	223	OG	SER	A	29	92.107	38.401	22.241	1.00	48.98	O
ATOM	224	N	ASN	A	30	89.878	39.357	24.491	1.00	40.37	N
ATOM	225	CA	ASN	A	30	89.489	38.892	25.819	1.00	39.43	C
ATOM	226	C	ASN	A	30	88.330	39.695	26.417	1.00	37.05	C
ATOM	227	O	ASN	A	30	87.912	39.442	27.548	1.00	36.90	O
ATOM	228	CB	ASN	A	30	90.677	38.942	26.788	1.00	41.28	C
ATOM	229	CG	ASN	A	30	91.830	38.061	26.348	1.00	44.29	C
ATOM	230	OD1	ASN	A	30	91.638	37.064	25.648	1.00	45.64	O
ATOM	231	ND2	ASN	A	30	93.040	38.417	26.773	1.00	44.79	N
ATOM	232	N	VAL	A	31	87.817	40.666	25.668	1.00	34.05	N
ATOM	233	CA	VAL	A	31	86.716	41.478	26.169	1.00	31.36	C
ATOM	234	C	VAL	A	31	85.404	40.711	26.051	1.00	30.32	C
ATOM	235	O	VAL	A	31	85.090	40.149	25.005	1.00	28.53	O
ATOM	236	CB	VAL	A	31	86.615	42.823	25.404	1.00	31.14	C
ATOM	237	CG1	VAL	A	31	85.429	43.641	25.919	1.00	29.88	C
ATOM	238	CG2	VAL	A	31	87.910	43.612	25.579	1.00	29.52	C
ATOM	239	N	ASN	A	32	84.653	40.680	27.144	1.00	29.79	N
ATOM	240	CA	ASN	A	32	83.369	39.987	27.195	1.00	30.76	C

TABLE 4

ATOM	241	C	ASN	A	32	82.246	41.013	27.030	1.00	30.01	C
ATOM	242	O	ASN	A	32	82.095	41.908	27.860	1.00	29.60	O
ATOM	243	CB	ASN	A	32	83.244	39.266	28.541	1.00	32.62	C
ATOM	244	CG	ASN	A	32	81.916	38.549	28.716	1.00	34.80	C
ATOM	245	OD1	ASN	A	32	81.640	38.004	29.786	1.00	38.96	O
ATOM	246	ND2	ASN	A	32	81.093	38.538	27.676	1.00	32.90	N
ATOM	247	N	LEU	A	33	81.458	40.872	25.964	1.00	29.61	N
ATOM	248	CA	LEU	A	33	80.361	41.798	25.677	1.00	29.44	C
ATOM	249	C	LEU	A	33	78.961	41.292	26.050	1.00	29.73	C
ATOM	250	O	LEU	A	33	77.955	41.805	25.555	1.00	29.64	O
ATOM	251	CB	LEU	A	33	80.397	42.176	24.191	1.00	30.47	C
ATOM	252	CG	LEU	A	33	80.910	43.558	23.761	1.00	31.37	C
ATOM	253	CD1	LEU	A	33	81.975	44.091	24.699	1.00	30.40	C
ATOM	254	CD2	LEU	A	33	81.439	43.446	22.350	1.00	31.39	C
ATOM	255	N	SER	A	34	78.892	40.289	26.920	1.00	28.68	N
ATOM	256	CA	SER	A	34	77.605	39.752	27.360	1.00	28.45	C
ATOM	257	C	SER	A	34	76.885	40.800	28.197	1.00	26.82	C
ATOM	258	O	SER	A	34	77.521	41.633	28.840	1.00	27.22	O
ATOM	259	CB	SER	A	34	77.812	38.502	28.216	1.00	28.51	C
ATOM	260	OG	SER	A	34	78.504	37.518	27.477	1.00	35.24	O
ATOM	261	N	THR	A	35	75.561	40.750	28.209	1.00	24.82	N
ATOM	262	CA	THR	A	35	74.795	41.709	28.982	1.00	23.94	C
ATOM	263	C	THR	A	35	73.380	41.170	29.201	1.00	24.11	C
ATOM	264	O	THR	A	35	72.834	40.470	28.349	1.00	25.00	O
ATOM	265	CB	THR	A	35	74.752	43.084	28.251	1.00	24.28	C
ATOM	266	OG1	THR	A	35	74.409	44.117	29.181	1.00	24.41	O
ATOM	267	CG2	THR	A	35	73.728	43.069	27.126	1.00	21.95	C
ATOM	268	N	PRO	A	36	72.776	41.478	30.358	1.00	23.32	N
ATOM	269	CA	PRO	A	36	71.419	41.023	30.687	1.00	22.99	C
ATOM	270	C	PRO	A	36	70.304	41.697	29.881	1.00	24.25	C
ATOM	271	O	PRO	A	36	70.321	42.912	29.670	1.00	23.91	O
ATOM	272	CB	PRO	A	36	71.309	41.328	32.177	1.00	22.91	C
ATOM	273	CG	PRO	A	36	72.159	42.567	32.321	1.00	22.08	C
ATOM	274	CD	PRO	A	36	73.370	42.236	31.475	1.00	22.10	C
ATOM	275	N	LEU	A	37	69.329	40.900	29.447	1.00	24.03	N
ATOM	276	CA	LEU	A	37	68.201	41.407	28.677	1.00	24.03	C
ATOM	277	C	LEU	A	37	66.974	41.670	29.552	1.00	24.86	C
ATOM	278	O	LEU	A	37	66.293	42.684	29.385	1.00	25.14	O
ATOM	279	CB	LEU	A	37	67.825	40.420	27.567	1.00	24.13	C
ATOM	280	CG	LEU	A	37	66.707	40.862	26.614	1.00	25.46	C
ATOM	281	CD1	LEU	A	37	67.191	42.043	25.759	1.00	24.90	C
ATOM	282	CD2	LEU	A	37	66.306	39.698	25.708	1.00	25.09	C
ATOM	283	N	VAL	A	38	66.691	40.767	30.487	1.00	24.24	N
ATOM	284	CA	VAL	A	38	65.525	40.920	31.347	1.00	24.00	C
ATOM	285	C	VAL	A	38	65.889	40.950	32.820	1.00	25.63	C
ATOM	286	O	VAL	A	38	66.942	40.454	33.215	1.00	26.92	O
ATOM	287	CB	VAL	A	38	64.488	39.802	31.074	1.00	24.41	C
ATOM	288	CG1	VAL	A	38	64.014	39.890	29.623	1.00	21.19	C
ATOM	289	CG2	VAL	A	38	65.100	38.427	31.349	1.00	23.21	C
ATOM	290	N	LYS	A	39	65.003	41.527	33.629	1.00	25.88	N
ATOM	291	CA	LYS	A	39	65.240	41.686	35.060	1.00	27.51	C
ATOM	292	C	LYS	A	39	65.422	40.413	35.869	1.00	28.51	C
ATOM	293	O	LYS	A	39	64.916	39.351	35.513	1.00	29.00	O
ATOM	294	CB	LYS	A	39	64.121	42.513	35.697	1.00	27.27	C
ATOM	295	CG	LYS	A	39	62.754	41.843	35.661	1.00	28.27	C
ATOM	296	CD	LYS	A	39	61.751	42.595	36.514	1.00	27.78	C
ATOM	297	CE	LYS	A	39	60.369	41.943	36.448	1.00	29.12	C

TABLE 4

ATOM	298	NZ	LYS	A	39	59.401	42.617	37.361	1.00	28.02	N
ATOM	299	N	PHE	A	40	66.152	40.556	36.973	1.00	28.42	N
ATOM	300	CA	PHE	A	40	66.439	39.470	37.893	1.00	29.14	C
ATOM	301	C	PHE	A	40	66.668	40.063	39.278	1.00	30.30	C
ATOM	302	O	PHE	A	40	66.794	41.278	39.421	1.00	30.54	O
ATOM	303	CB	PHE	A	40	67.687	38.697	37.449	1.00	28.10	C
ATOM	304	CG	PHE	A	40	68.913	39.558	37.251	1.00	27.25	C
ATOM	305	CD1	PHE	A	40	69.163	40.167	36.023	1.00	25.59	C
ATOM	306	CD2	PHE	A	40	69.824	39.743	38.287	1.00	25.17	C
ATOM	307	CE1	PHE	A	40	70.304	40.944	35.830	1.00	25.72	C
ATOM	308	CE2	PHE	A	40	70.968	40.518	38.106	1.00	25.52	C
ATOM	309	CZ	PHE	A	40	71.211	41.120	36.873	1.00	26.27	C
ATOM	310	N	GLN	A	41	66.713	39.200	40.291	1.00	31.34	N
ATOM	311	CA	GLN	A	41	66.927	39.622	41.672	1.00	33.56	C
ATOM	312	C	GLN	A	41	68.408	39.585	41.998	1.00	32.76	C
ATOM	313	O	GLN	A	41	69.183	38.929	41.305	1.00	32.65	O
ATOM	314	CB	GLN	A	41	66.190	38.685	42.641	1.00	36.73	C
ATOM	315	CG	GLN	A	41	64.681	38.719	42.523	1.00	42.60	C
ATOM	316	CD	GLN	A	41	64.087	40.002	43.073	1.00	45.09	C
ATOM	317	OE1	GLN	A	41	62.956	40.359	42.749	1.00	48.80	O
ATOM	318	NE2	GLN	A	41	64.842	40.693	43.921	1.00	48.01	N
ATOM	319	N	LYS	A	42	68.798	40.280	43.061	1.00	32.91	N
ATOM	320	CA	LYS	A	42	70.191	40.291	43.471	1.00	34.34	C
ATOM	321	C	LYS	A	42	70.670	38.865	43.747	1.00	34.29	C
ATOM	322	O	LYS	A	42	69.934	38.055	44.311	1.00	32.99	O
ATOM	323	CB	LYS	A	42	70.382	41.129	44.731	1.00	35.20	C
ATOM	324	CG	LYS	A	42	71.849	41.328	45.053	1.00	39.21	C
ATOM	325	CD	LYS	A	42	72.079	42.234	46.244	1.00	42.37	C
ATOM	326	CE	LYS	A	42	71.760	41.547	47.549	1.00	42.56	C
ATOM	327	NZ	LYS	A	42	72.329	42.327	48.680	1.00	43.58	N
ATOM	328	N	GLY	A	43	71.902	38.568	43.345	1.00	34.17	N
ATOM	329	CA	GLY	A	43	72.457	37.244	43.565	1.00	34.57	C
ATOM	330	C	GLY	A	43	72.186	36.277	42.431	1.00	34.77	C
ATOM	331	O	GLY	A	43	72.784	35.202	42.361	1.00	34.67	O
ATOM	332	N	GLN	A	44	71.282	36.655	41.538	1.00	35.36	N
ATOM	333	CA	GLN	A	44	70.942	35.810	40.403	1.00	36.05	C
ATOM	334	C	GLN	A	44	71.551	36.364	39.123	1.00	35.80	C
ATOM	335	O	GLN	A	44	72.230	37.390	39.138	1.00	35.18	O
ATOM	336	CB	GLN	A	44	69.422	35.740	40.228	1.00	38.46	C
ATOM	337	CG	GLN	A	44	68.644	35.556	41.517	1.00	42.54	C
ATOM	338	CD	GLN	A	44	67.145	35.481	41.281	1.00	44.54	C
ATOM	339	OE1	GLN	A	44	66.583	36.271	40.517	1.00	46.34	O
ATOM	340	NE2	GLN	A	44	66.487	34.539	41.945	1.00	44.29	N
ATOM	341	N	GLN	A	45	71.299	35.664	38.022	1.00	35.96	N
ATOM	342	CA	GLN	A	45	71.759	36.055	36.695	1.00	36.42	C
ATOM	343	C	GLN	A	45	70.469	36.221	35.907	1.00	35.19	C
ATOM	344	O	GLN	A	45	69.435	35.682	36.293	1.00	35.44	O
ATOM	345	CB	GLN	A	45	72.586	34.943	36.039	1.00	39.65	C
ATOM	346	CG	GLN	A	45	73.865	34.569	36.763	1.00	44.40	C
ATOM	347	CD	GLN	A	45	74.951	35.614	36.610	1.00	47.78	C
ATOM	348	OE1	GLN	A	45	75.471	35.834	35.510	1.00	50.39	O
ATOM	349	NE2	GLN	A	45	75.303	36.266	37.714	1.00	48.43	N
ATOM	350	N	SER	A	46	70.519	36.967	34.812	1.00	32.83	N
ATOM	351	CA	SER	A	46	69.333	37.154	33.995	1.00	32.14	C
ATOM	352	C	SER	A	46	69.040	35.856	33.244	1.00	32.13	C
ATOM	353	O	SER	A	46	69.962	35.137	32.864	1.00	32.53	O
ATOM	354	CB	SER	A	46	69.554	38.289	32.996	1.00	29.54	C

TABLE 4

ATOM	355	OG	SER	A	46	68.415	38.451	32.179	1.00	28.47	O
ATOM	356	N	GLU	A	47	67.762	35.562	33.032	1.00	32.14	N
ATOM	357	CA	GLU	A	47	67.364	34.355	32.318	1.00	32.15	C
ATOM	358	C	GLU	A	47	67.768	34.441	30.856	1.00	31.61	C
ATOM	359	O	GLU	A	47	67.865	33.424	30.169	1.00	30.42	O
ATOM	360	CB	GLU	A	47	65.853	34.154	32.418	1.00	34.33	C
ATOM	361	CG	GLU	A	47	65.358	33.856	33.823	1.00	37.88	C
ATOM	362	CD	GLU	A	47	63.844	33.834	33.905	1.00	41.09	C
ATOM	363	OE1	GLU	A	47	63.226	32.981	33.231	1.00	43.20	O
ATOM	364	OE2	GLU	A	47	63.271	34.671	34.639	1.00	43.10	O
ATOM	365	N	ILE	A	48	67.978	35.663	30.373	1.00	30.37	N
ATOM	366	CA	ILE	A	48	68.392	35.871	28.990	1.00	29.07	C
ATOM	367	C	ILE	A	48	69.551	36.863	28.923	1.00	28.22	C
ATOM	368	O	ILE	A	48	69.434	38.010	29.354	1.00	27.33	O
ATOM	369	CB	ILE	A	48	67.241	36.415	28.113	1.00	29.02	C
ATOM	370	CG1	ILE	A	48	66.068	35.430	28.102	1.00	29.85	C
ATOM	371	CG2	ILE	A	48	67.744	36.639	26.687	1.00	28.61	C
ATOM	372	CD1	ILE	A	48	64.865	35.915	27.302	1.00	29.38	C
ATOM	373	N	ASN	A	49	70.676	36.412	28.388	1.00	27.92	N
ATOM	374	CA	ASN	A	49	71.839	37.271	28.258	1.00	28.26	C
ATOM	375	C	ASN	A	49	72.251	37.351	26.798	1.00	28.80	C
ATOM	376	O	ASN	A	49	72.436	36.328	26.143	1.00	30.14	O
ATOM	377	CB	ASN	A	49	72.997	36.726	29.101	1.00	27.34	C
ATOM	378	CG	ASN	A	49	72.738	36.847	30.592	1.00	27.92	C
ATOM	379	OD1	ASN	A	49	72.899	37.914	31.176	1.00	26.65	O
ATOM	380	ND2	ASN	A	49	72.317	35.752	31.211	1.00	27.88	N
ATOM	381	N	LEU	A	50	72.367	38.569	26.281	1.00	28.12	N
ATOM	382	CA	LEU	A	50	72.795	38.760	24.899	1.00	27.11	C
ATOM	383	C	LEU	A	50	74.302	38.496	24.876	1.00	26.67	C
ATOM	384	O	LEU	A	50	74.964	38.644	25.900	1.00	25.35	O
ATOM	385	CB	LEU	A	50	72.530	40.203	24.454	1.00	26.25	C
ATOM	386	CG	LEU	A	50	71.098	40.734	24.549	1.00	27.50	C
ATOM	387	CD1	LEU	A	50	71.071	42.216	24.160	1.00	25.93	C
ATOM	388	CD2	LEU	A	50	70.190	39.917	23.632	1.00	27.40	C
ATOM	389	N	LYS	A	51	74.837	38.100	23.723	1.00	27.96	N
ATOM	390	CA	LYS	A	51	76.275	37.859	23.585	1.00	29.04	C
ATOM	391	C	LYS	A	51	76.941	39.189	23.217	1.00	27.91	C
ATOM	392	O	LYS	A	51	78.128	39.397	23.472	1.00	28.86	O
ATOM	393	CB	LYS	A	51	76.564	36.813	22.496	1.00	30.79	C
ATOM	394	CG	LYS	A	51	76.813	35.389	23.004	1.00	33.79	C
ATOM	395	CD	LYS	A	51	75.558	34.739	23.541	1.00	36.94	C
ATOM	396	CE	LYS	A	51	75.836	33.339	24.093	1.00	39.15	C
ATOM	397	NZ	LYS	A	51	76.304	32.377	23.060	1.00	40.17	N
ATOM	398	N	ILE	A	52	76.163	40.070	22.590	1.00	26.85	N
ATOM	399	CA	ILE	A	52	76.608	41.411	22.216	1.00	24.81	C
ATOM	400	C	ILE	A	52	75.442	42.326	22.590	1.00	25.02	C
ATOM	401	O	ILE	A	52	74.276	41.961	22.425	1.00	24.33	O
ATOM	402	CB	ILE	A	52	76.950	41.540	20.700	1.00	25.62	C
ATOM	403	CG1	ILE	A	52	75.738	41.178	19.833	1.00	25.04	C
ATOM	404	CG2	ILE	A	52	78.159	40.654	20.370	1.00	25.34	C
ATOM	405	CD1	ILE	A	52	75.946	41.460	18.351	1.00	22.84	C
ATOM	406	N	PRO	A	53	75.742	43.527	23.102	1.00	24.40	N
ATOM	407	CA	PRO	A	53	74.732	44.502	23.526	1.00	25.22	C
ATOM	408	C	PRO	A	53	73.979	45.272	22.439	1.00	25.38	C
ATOM	409	O	PRO	A	53	73.644	46.438	22.638	1.00	25.66	O
ATOM	410	CB	PRO	A	53	75.535	45.432	24.426	1.00	23.34	C
ATOM	411	CG	PRO	A	53	76.829	45.526	23.670	1.00	24.00	C

TABLE 4

ATOM	412	CD	PRO	A	53	77.101	44.079	23.267	1.00	23.34	C
ATOM	413	N	LEU	A	54	73.705	44.633	21.304	1.00	25.11	N
ATOM	414	CA	LEU	A	54	72.982	45.306	20.229	1.00	24.78	C
ATOM	415	C	LEU	A	54	71.670	44.607	19.883	1.00	25.72	C
ATOM	416	O	LEU	A	54	71.613	43.375	19.783	1.00	25.86	O
ATOM	417	CB	LEU	A	54	73.842	45.382	18.965	1.00	24.66	C
ATOM	418	CG	LEU	A	54	75.270	45.925	19.050	1.00	24.20	C
ATOM	419	CD1	LEU	A	54	75.865	45.913	17.660	1.00	22.76	C
ATOM	420	CD2	LEU	A	54	75.288	47.333	19.636	1.00	23.83	C
ATOM	421	N	VAL	A	55	70.613	45.396	19.721	1.00	24.79	N
ATOM	422	CA	VAL	A	55	69.315	44.866	19.335	1.00	25.45	C
ATOM	423	C	VAL	A	55	68.803	45.777	18.220	1.00	26.67	C
ATOM	424	O	VAL	A	55	69.044	46.988	18.252	1.00	26.82	O
ATOM	425	CB	VAL	A	55	68.298	44.846	20.519	1.00	24.52	C
ATOM	426	CG1	VAL	A	55	68.889	44.086	21.698	1.00	23.68	C
ATOM	427	CG2	VAL	A	55	67.906	46.263	20.922	1.00	25.10	C
ATOM	428	N	SER	A	56	68.132	45.197	17.225	1.00	26.09	N
ATOM	429	CA	SER	A	56	67.603	45.980	16.111	1.00	26.11	C
ATOM	430	C	SER	A	56	66.219	46.532	16.453	1.00	25.25	C
ATOM	431	O	SER	A	56	65.418	45.877	17.121	1.00	25.67	O
ATOM	432	CB	SER	A	56	67.565	45.135	14.825	1.00	26.43	C
ATOM	433	OG	SER	A	56	66.749	43.988	14.965	1.00	27.47	O
ATOM	434	N	ALA	A	57	65.957	47.751	15.996	1.00	24.68	N
ATOM	435	CA	ALA	A	57	64.710	48.458	16.270	1.00	25.05	C
ATOM	436	C	ALA	A	57	63.407	47.783	15.820	1.00	25.91	C
ATOM	437	O	ALA	A	57	63.375	47.019	14.853	1.00	25.61	O
ATOM	438	CB	ALA	A	57	64.797	49.868	15.691	1.00	22.75	C
ATOM	439	N	ILE	A	58	62.335	48.091	16.544	1.00	25.97	N
ATOM	440	CA	ILE	A	58	61.002	47.555	16.276	1.00	27.20	C
ATOM	441	C	ILE	A	58	60.400	48.361	15.124	1.00	27.24	C
ATOM	442	O	ILE	A	58	59.417	49.088	15.297	1.00	28.19	O
ATOM	443	CB	ILE	A	58	60.114	47.696	17.535	1.00	26.40	C
ATOM	444	CG1	ILE	A	58	60.929	47.293	18.773	1.00	26.10	C
ATOM	445	CG2	ILE	A	58	58.869	46.829	17.403	1.00	25.39	C
ATOM	446	CD1	ILE	A	58	60.144	47.268	20.061	1.00	25.45	C
ATOM	447	N	MET	A	59	60.998	48.213	13.945	1.00	27.31	N
ATOM	448	CA	MET	A	59	60.581	48.965	12.768	1.00	27.85	C
ATOM	449	C	MET	A	59	60.419	48.127	11.501	1.00	28.29	C
ATOM	450	O	MET	A	59	61.177	47.185	11.261	1.00	27.17	O
ATOM	451	CB	MET	A	59	61.604	50.072	12.503	1.00	27.11	C
ATOM	452	CG	MET	A	59	61.908	50.946	13.711	1.00	26.18	C
ATOM	453	SD	MET	A	59	63.235	52.128	13.373	1.00	28.54	S
ATOM	454	CE	MET	A	59	62.471	53.130	12.107	1.00	25.89	C
ATOM	455	N	GLN	A	60	59.444	48.505	10.679	1.00	29.33	N
ATOM	456	CA	GLN	A	60	59.163	47.806	9.428	1.00	30.56	C
ATOM	457	C	GLN	A	60	60.372	47.772	8.503	1.00	30.93	C
ATOM	458	O	GLN	A	60	60.576	46.800	7.783	1.00	31.46	O
ATOM	459	CB	GLN	A	60	58.006	48.479	8.674	1.00	31.20	C
ATOM	460	CG	GLN	A	60	56.741	48.712	9.491	1.00	32.68	C
ATOM	461	CD	GLN	A	60	55.654	49.395	8.680	1.00	33.85	C
ATOM	462	OE1	GLN	A	60	55.941	50.208	7.802	1.00	36.50	O
ATOM	463	NE2	GLN	A	60	54.401	49.079	8.979	1.00	34.24	N
ATOM	464	N	SER	A	61	61.171	48.834	8.519	1.00	30.66	N
ATOM	465	CA	SER	A	61	62.332	48.906	7.639	1.00	31.00	C
ATOM	466	C	SER	A	61	63.619	48.359	8.241	1.00	30.65	C
ATOM	467	O	SER	A	61	64.695	48.514	7.659	1.00	30.72	O
ATOM	468	CB	SER	A	61	62.553	50.353	7.185	1.00	30.89	C

TABLE 4

ATOM	469	OG	SER	A	61	62.658	51.225	8.292	1.00	34.36	O
ATOM	470	N	VAL	A	62	63.512	47.698	9.388	1.00	30.00	N
ATOM	471	CA	VAL	A	62	64.696	47.165	10.039	1.00	29.68	C
ATOM	472	C	VAL	A	62	64.642	45.696	10.449	1.00	30.05	C
ATOM	473	O	VAL	A	62	65.413	44.880	9.948	1.00	30.69	O
ATOM	474	CB	VAL	A	62	65.046	47.997	11.306	1.00	29.93	C
ATOM	475	CG1	VAL	A	62	66.287	47.418	11.989	1.00	30.22	C
ATOM	476	CG2	VAL	A	62	65.280	49.460	10.926	1.00	29.24	C
ATOM	477	N	SER	A	63	63.729	45.364	11.354	1.00	30.78	N
ATOM	478	CA	SER	A	63	63.641	44.011	11.889	1.00	31.26	C
ATOM	479	C	SER	A	63	62.664	43.019	11.267	1.00	32.02	C
ATOM	480	O	SER	A	63	61.535	42.842	11.741	1.00	30.32	O
ATOM	481	CB	SER	A	63	63.389	44.091	13.400	1.00	30.76	C
ATOM	482	OG	SER	A	63	64.420	44.825	14.051	1.00	29.40	O
ATOM	483	N	GLY	A	64	63.122	42.361	10.211	1.00	32.88	N
ATOM	484	CA	GLY	A	64	62.320	41.352	9.553	1.00	33.87	C
ATOM	485	C	GLY	A	64	62.916	40.005	9.925	1.00	35.96	C
ATOM	486	O	GLY	A	64	63.761	39.932	10.823	1.00	33.92	O
ATOM	487	N	GLU	A	65	62.501	38.949	9.226	1.00	37.32	N
ATOM	488	CA	GLU	A	65	62.980	37.596	9.493	1.00	39.14	C
ATOM	489	C	GLU	A	65	64.487	37.461	9.320	1.00	37.65	C
ATOM	490	O	GLU	A	65	65.175	36.945	10.198	1.00	36.98	O
ATOM	491	CB	GLU	A	65	62.298	36.591	8.559	1.00	42.54	C
ATOM	492	CG	GLU	A	65	60.841	36.885	8.260	1.00	48.99	C
ATOM	493	CD	GLU	A	65	60.245	35.884	7.283	1.00	53.35	C
ATOM	494	OE1	GLU	A	65	60.872	35.654	6.224	1.00	55.95	O
ATOM	495	OE2	GLU	A	65	59.155	35.333	7.568	1.00	54.54	O
ATOM	496	N	LYS	A	66	64.991	37.914	8.177	1.00	37.01	N
ATOM	497	CA	LYS	A	66	66.416	37.820	7.883	1.00	36.92	C
ATOM	498	C	LYS	A	66	67.290	38.597	8.859	1.00	34.95	C
ATOM	499	O	LYS	A	66	68.373	38.140	9.228	1.00	33.49	O
ATOM	500	CB	LYS	A	66	66.691	38.282	6.448	1.00	38.53	C
ATOM	501	CG	LYS	A	66	66.185	37.309	5.397	1.00	43.00	C
ATOM	502	CD	LYS	A	66	66.517	37.777	3.987	1.00	47.32	C
ATOM	503	CE	LYS	A	66	66.060	36.759	2.944	1.00	48.73	C
ATOM	504	NZ	LYS	A	66	66.276	37.246	1.549	1.00	49.84	N
ATOM	505	N	MET	A	67	66.826	39.772	9.272	1.00	33.11	N
ATOM	506	CA	MET	A	67	67.582	40.584	10.218	1.00	32.25	C
ATOM	507	C	MET	A	67	67.696	39.825	11.536	1.00	32.26	C
ATOM	508	O	MET	A	67	68.780	39.717	12.106	1.00	32.78	O
ATOM	509	CB	MET	A	67	66.882	41.927	10.452	1.00	31.65	C
ATOM	510	CG	MET	A	67	67.589	42.843	11.447	1.00	30.85	C
ATOM	511	SD	MET	A	67	69.259	43.315	10.933	1.00	30.60	S
ATOM	512	CE	MET	A	67	68.905	44.374	9.529	1.00	28.51	C
ATOM	513	N	ALA	A	68	66.573	39.286	12.003	1.00	30.79	N
ATOM	514	CA	ALA	A	68	66.535	38.548	13.261	1.00	30.85	C
ATOM	515	C	ALA	A	68	67.495	37.355	13.281	1.00	31.53	C
ATOM	516	O	ALA	A	68	68.158	37.099	14.286	1.00	31.47	O
ATOM	517	CB	ALA	A	68	65.114	38.089	13.542	1.00	29.40	C
ATOM	518	N	ILE	A	69	67.573	36.632	12.169	1.00	31.56	N
ATOM	519	CA	ILE	A	69	68.466	35.484	12.067	1.00	31.71	C
ATOM	520	C	ILE	A	69	69.923	35.952	12.011	1.00	31.13	C
ATOM	521	O	ILE	A	69	70.778	35.446	12.734	1.00	31.74	O
ATOM	522	CB	ILE	A	69	68.137	34.645	10.801	1.00	33.02	C
ATOM	523	CG1	ILE	A	69	66.787	33.942	10.983	1.00	34.17	C
ATOM	524	CG2	ILE	A	69	69.236	33.629	10.535	1.00	32.75	C
ATOM	525	CD1	ILE	A	69	66.173	33.422	9.680	1.00	34.42	C

TABLE 4

ATOM	526	N	ALA	A	70	70.194	36.933	11.155	1.00	30.92	N
ATOM	527	CA	ALA	A	70	71.540	37.468	11.000	1.00	29.65	C
ATOM	528	C	ALA	A	70	72.102	38.049	12.298	1.00	29.11	C
ATOM	529	O	ALA	A	70	73.278	37.866	12.602	1.00	28.78	O
ATOM	530	CB	ALA	A	70	71.550	38.529	9.914	1.00	30.07	C
ATOM	531	N	LEU	A	71	71.263	38.752	13.055	1.00	28.45	N
ATOM	532	CA	LEU	A	71	71.701	39.357	14.308	1.00	28.31	C
ATOM	533	C	LEU	A	71	71.845	38.324	15.420	1.00	29.00	C
ATOM	534	O	LEU	A	71	72.796	38.377	16.198	1.00	28.61	O
ATOM	535	CB	LEU	A	71	70.726	40.453	14.742	1.00	26.49	C
ATOM	536	CG	LEU	A	71	71.090	41.270	15.992	1.00	26.53	C
ATOM	537	CD1	LEU	A	71	72.561	41.711	15.941	1.00	24.18	C
ATOM	538	CD2	LEU	A	71	70.168	42.487	16.073	1.00	24.70	C
ATOM	539	N	ALA	A	72	70.899	37.392	15.502	1.00	29.36	N
ATOM	540	CA	ALA	A	72	70.966	36.355	16.526	1.00	29.89	C
ATOM	541	C	ALA	A	72	72.251	35.553	16.336	1.00	30.74	C
ATOM	542	O	ALA	A	72	72.890	35.147	17.308	1.00	29.87	O
ATOM	543	CB	ALA	A	72	69.747	35.429	16.435	1.00	28.97	C
ATOM	544	N	ARG	A	73	72.623	35.330	15.077	1.00	31.36	N
ATOM	545	CA	ARG	A	73	73.832	34.580	14.761	1.00	33.37	C
ATOM	546	C	ARG	A	73	75.082	35.242	15.321	1.00	33.97	C
ATOM	547	O	ARG	A	73	76.062	34.562	15.616	1.00	34.69	O
ATOM	548	CB	ARG	A	73	73.988	34.414	13.247	1.00	34.83	C
ATOM	549	CG	ARG	A	73	73.071	33.373	12.630	1.00	37.24	C
ATOM	550	CD	ARG	A	73	73.289	33.268	11.124	1.00	40.12	C
ATOM	551	NE	ARG	A	73	72.462	32.222	10.531	1.00	43.25	N
ATOM	552	CZ	ARG	A	73	72.258	32.069	9.225	1.00	45.18	C
ATOM	553	NH1	ARG	A	73	72.821	32.899	8.354	1.00	44.94	N
ATOM	554	NH2	ARG	A	73	71.484	31.083	8.789	1.00	45.96	N
ATOM	555	N	GLU	A	74	75.050	36.566	15.463	1.00	33.85	N
ATOM	556	CA	GLU	A	74	76.198	37.293	15.995	1.00	33.08	C
ATOM	557	C	GLU	A	74	76.089	37.514	17.501	1.00	31.63	C
ATOM	558	O	GLU	A	74	77.011	38.037	18.119	1.00	32.56	O
ATOM	559	CB	GLU	A	74	76.367	38.642	15.286	1.00	34.18	C
ATOM	560	CG	GLU	A	74	76.569	38.544	13.779	1.00	37.13	C
ATOM	561	CD	GLU	A	74	77.709	37.611	13.384	1.00	39.95	C
ATOM	562	OE1	GLU	A	74	78.834	37.775	13.909	1.00	41.16	O
ATOM	563	OE2	GLU	A	74	77.478	36.718	12.539	1.00	40.45	O
ATOM	564	N	GLY	A	75	74.964	37.127	18.095	1.00	30.42	N
ATOM	565	CA	GLY	A	75	74.820	37.284	19.533	1.00	29.77	C
ATOM	566	C	GLY	A	75	73.815	38.310	20.019	1.00	29.50	C
ATOM	567	O	GLY	A	75	73.598	38.439	21.222	1.00	29.13	O
ATOM	568	N	GLY	A	76	73.212	39.051	19.096	1.00	29.23	N
ATOM	569	CA	GLY	A	76	72.226	40.042	19.483	1.00	28.60	C
ATOM	570	C	GLY	A	76	70.831	39.498	19.245	1.00	28.37	C
ATOM	571	O	GLY	A	76	70.668	38.304	18.976	1.00	26.97	O
ATOM	572	N	ILE	A	77	69.823	40.361	19.345	1.00	27.56	N
ATOM	573	CA	ILE	A	77	68.445	39.937	19.122	1.00	27.52	C
ATOM	574	C	ILE	A	77	67.643	41.025	18.409	1.00	28.94	C
ATOM	575	O	ILE	A	77	67.905	42.221	18.572	1.00	28.96	O
ATOM	576	CB	ILE	A	77	67.750	39.578	20.455	1.00	26.85	C
ATOM	577	CG1	ILE	A	77	66.524	38.704	20.183	1.00	27.10	C
ATOM	578	CG2	ILE	A	77	67.332	40.852	21.205	1.00	24.72	C
ATOM	579	CD1	ILE	A	77	65.800	38.268	21.443	1.00	24.29	C
ATOM	580	N	SER	A	78	66.674	40.602	17.605	1.00	28.99	N
ATOM	581	CA	SER	A	78	65.824	41.529	16.872	1.00	28.68	C
ATOM	582	C	SER	A	78	64.409	41.496	17.423	1.00	28.78	C



TABLE 4

ATOM	583	O	SER	A	78	63.950	40.469	17.913	1.00	30.10	O
ATOM	584	CB	SER	A	78	65.775	41.160	15.387	1.00	27.58	C
ATOM	585	OG	SER	A	78	67.004	41.415	14.743	1.00	27.37	O
ATOM	586	N	PHE	A	79	63.727	42.632	17.357	1.00	28.40	N
ATOM	587	CA	PHE	A	79	62.350	42.710	17.807	1.00	28.34	C
ATOM	588	C	PHE	A	79	61.494	42.893	16.558	1.00	28.91	C
ATOM	589	O	PHE	A	79	61.360	44.004	16.048	1.00	29.07	O
ATOM	590	CB	PHE	A	79	62.150	43.885	18.778	1.00	26.91	C
ATOM	591	CG	PHE	A	79	62.715	43.635	20.155	1.00	27.54	C
ATOM	592	CD1	PHE	A	79	64.067	43.839	20.421	1.00	28.32	C
ATOM	593	CD2	PHE	A	79	61.902	43.146	21.175	1.00	27.29	C
ATOM	594	CE1	PHE	A	79	64.601	43.555	21.685	1.00	28.62	C
ATOM	595	CE2	PHE	A	79	62.426	42.861	22.436	1.00	27.31	C
ATOM	596	CZ	PHE	A	79	63.775	43.065	22.691	1.00	27.27	C
ATOM	597	N	ILE	A	80	60.947	41.789	16.053	1.00	28.75	N
ATOM	598	CA	ILE	A	80	60.102	41.815	14.861	1.00	29.29	C
ATOM	599	C	ILE	A	80	59.054	42.919	15.011	1.00	29.89	C
ATOM	600	O	ILE	A	80	58.319	42.950	16.000	1.00	30.34	O
ATOM	601	CB	ILE	A	80	59.384	40.450	14.657	1.00	29.92	C
ATOM	602	CG1	ILE	A	80	60.416	39.326	14.516	1.00	30.32	C
ATOM	603	CG2	ILE	A	80	58.499	40.498	13.414	1.00	29.91	C
ATOM	604	CD1	ILE	A	80	61.356	39.496	13.341	1.00	30.51	C
ATOM	605	N	PHE	A	81	58.981	43.821	14.035	1.00	30.13	N
ATOM	606	CA	PHE	A	81	58.027	44.922	14.120	1.00	31.72	C
ATOM	607	C	PHE	A	81	56.579	44.473	14.289	1.00	31.73	C
ATOM	608	O	PHE	A	81	56.136	43.510	13.661	1.00	32.24	O
ATOM	609	CB	PHE	A	81	58.150	45.861	12.905	1.00	32.72	C
ATOM	610	CG	PHE	A	81	57.886	45.203	11.573	1.00	34.52	C
ATOM	611	CD1	PHE	A	81	58.857	44.422	10.959	1.00	34.19	C
ATOM	612	CD2	PHE	A	81	56.673	45.396	10.918	1.00	35.24	C
ATOM	613	CE1	PHE	A	81	58.625	43.844	9.708	1.00	34.16	C
ATOM	614	CE2	PHE	A	81	56.432	44.823	9.668	1.00	35.18	C
ATOM	615	CZ	PHE	A	81	57.410	44.048	9.064	1.00	34.69	C
ATOM	616	N	GLY	A	82	55.851	45.179	15.152	1.00	31.39	N
ATOM	617	CA	GLY	A	82	54.462	44.851	15.401	1.00	32.43	C
ATOM	618	C	GLY	A	82	53.490	45.673	14.574	1.00	33.20	C
ATOM	619	O	GLY	A	82	52.277	45.505	14.688	1.00	33.41	O
ATOM	620	N	SER	A	83	54.012	46.567	13.741	1.00	33.11	N
ATOM	621	CA	SER	A	83	53.156	47.392	12.900	1.00	34.17	C
ATOM	622	C	SER	A	83	52.759	46.625	11.640	1.00	34.38	C
ATOM	623	O	SER	A	83	53.044	47.038	10.517	1.00	34.03	O
ATOM	624	CB	SER	A	83	53.867	48.697	12.534	1.00	33.42	C
ATOM	625	OG	SER	A	83	55.143	48.439	11.990	1.00	34.18	O
ATOM	626	N	GLN	A	84	52.110	45.487	11.855	1.00	35.41	N
ATOM	627	CA	GLN	A	84	51.640	44.625	10.780	1.00	36.62	C
ATOM	628	C	GLN	A	84	50.585	43.711	11.397	1.00	37.53	C
ATOM	629	O	GLN	A	84	50.373	43.741	12.611	1.00	36.60	O
ATOM	630	CB	GLN	A	84	52.794	43.797	10.201	1.00	37.29	C
ATOM	631	CG	GLN	A	84	53.412	42.805	11.174	1.00	37.90	C
ATOM	632	CD	GLN	A	84	54.568	42.035	10.563	1.00	39.55	C
ATOM	633	OE1	GLN	A	84	54.427	41.416	9.510	1.00	41.11	O
ATOM	634	NE2	GLN	A	84	55.720	42.065	11.228	1.00	39.70	N
ATOM	635	N	SER	A	85	49.921	42.908	10.571	1.00	38.61	N
ATOM	636	CA	SER	A	85	48.888	42.013	11.079	1.00	40.37	C
ATOM	637	C	SER	A	85	49.485	41.050	12.092	1.00	40.61	C
ATOM	638	O	SER	A	85	50.655	40.678	11.993	1.00	40.59	O
ATOM	639	CB	SER	A	85	48.249	41.211	9.943	1.00	40.55	C

TABLE 4

ATOM	640	OG	SER	A	85	49.115	40.182	9.501	1.00	41.70	O
ATOM	641	N	ILE	A	86	48.667	40.657	13.063	1.00	40.88	N
ATOM	642	CA	ILE	A	86	49.079	39.732	14.108	1.00	41.21	C
ATOM	643	C	ILE	A	86	49.589	38.424	13.508	1.00	42.63	C
ATOM	644	O	ILE	A	86	50.578	37.858	13.977	1.00	42.00	O
ATOM	645	CB	ILE	A	86	47.899	39.429	15.061	1.00	40.49	C
ATOM	646	CG1	ILE	A	86	47.454	40.722	15.750	1.00	39.68	C
ATOM	647	CG2	ILE	A	86	48.299	38.366	16.079	1.00	39.80	C
ATOM	648	CD1	ILE	A	86	46.272	40.558	16.686	1.00	38.99	C
ATOM	649	N	GLU	A	87	48.918	37.952	12.462	1.00	43.90	N
ATOM	650	CA	GLU	A	87	49.314	36.709	11.814	1.00	45.61	C
ATOM	651	C	GLU	A	87	50.604	36.839	11.009	1.00	44.76	C
ATOM	652	O	GLU	A	87	51.355	35.874	10.879	1.00	45.04	O
ATOM	653	CB	GLU	A	87	48.177	36.173	10.924	1.00	47.51	C
ATOM	654	CG	GLU	A	87	47.243	37.229	10.324	1.00	51.63	C
ATOM	655	CD	GLU	A	87	46.341	37.895	11.362	1.00	53.09	C
ATOM	656	OE1	GLU	A	87	45.804	37.180	12.238	1.00	54.09	O
ATOM	657	OE2	GLU	A	87	46.156	39.131	11.290	1.00	53.94	O
ATOM	658	N	SER	A	88	50.865	38.025	10.470	1.00	44.57	N
ATOM	659	CA	SER	A	88	52.091	38.246	9.704	1.00	44.09	C
ATOM	660	C	SER	A	88	53.295	38.287	10.643	1.00	42.16	C
ATOM	661	O	SER	A	88	54.343	37.720	10.346	1.00	41.66	O
ATOM	662	CB	SER	A	88	52.017	39.560	8.925	1.00	45.33	C
ATOM	663	OG	SER	A	88	51.076	39.473	7.875	1.00	49.27	O
ATOM	664	N	GLN	A	89	53.137	38.966	11.774	1.00	40.30	N
ATOM	665	CA	GLN	A	89	54.214	39.070	12.750	1.00	39.20	C
ATOM	666	C	GLN	A	89	54.529	37.696	13.336	1.00	38.78	C
ATOM	667	O	GLN	A	89	55.695	37.325	13.477	1.00	38.47	O
ATOM	668	CB	GLN	A	89	53.827	40.046	13.867	1.00	37.90	C
ATOM	669	CG	GLN	A	89	54.856	40.158	14.984	1.00	36.29	C
ATOM	670	CD	GLN	A	89	54.484	41.196	16.025	1.00	35.77	C
ATOM	671	OE1	GLN	A	89	53.314	41.342	16.381	1.00	34.41	O
ATOM	672	NE2	GLN	A	89	55.483	41.910	16.534	1.00	34.88	N
ATOM	673	N	ALA	A	90	53.487	36.940	13.668	1.00	38.89	N
ATOM	674	CA	ALA	A	90	53.665	35.606	14.236	1.00	38.52	C
ATOM	675	C	ALA	A	90	54.416	34.706	13.258	1.00	37.75	C
ATOM	676	O	ALA	A	90	55.284	33.932	13.658	1.00	37.34	O
ATOM	677	CB	ALA	A	90	52.310	34.996	14.580	1.00	38.78	C
ATOM	678	N	ALA	A	91	54.086	34.815	11.976	1.00	37.31	N
ATOM	679	CA	ALA	A	91	54.751	34.007	10.960	1.00	37.66	C
ATOM	680	C	ALA	A	91	56.259	34.272	10.972	1.00	37.59	C
ATOM	681	O	ALA	A	91	57.061	33.339	10.934	1.00	37.08	O
ATOM	682	CB	ALA	A	91	54.170	34.312	9.582	1.00	36.97	C
ATOM	683	N	MET	A	92	56.644	35.544	11.023	1.00	38.21	N
ATOM	684	CA	MET	A	92	58.063	35.898	11.052	1.00	38.30	C
ATOM	685	C	MET	A	92	58.747	35.311	12.282	1.00	37.53	C
ATOM	686	O	MET	A	92	59.841	34.756	12.188	1.00	37.70	O
ATOM	687	CB	MET	A	92	58.242	37.418	11.054	1.00	39.02	C
ATOM	688	CG	MET	A	92	57.888	38.093	9.747	1.00	39.39	C
ATOM	689	SD	MET	A	92	58.282	39.850	9.772	1.00	39.06	S
ATOM	690	CE	MET	A	92	57.340	40.410	8.355	1.00	38.06	C
ATOM	691	N	VAL	A	93	58.099	35.443	13.436	1.00	37.33	N
ATOM	692	CA	VAL	A	93	58.647	34.919	14.679	1.00	37.59	C
ATOM	693	C	VAL	A	93	58.822	33.416	14.558	1.00	38.75	C
ATOM	694	O	VAL	A	93	59.865	32.871	14.915	1.00	39.48	O
ATOM	695	CB	VAL	A	93	57.718	35.218	15.877	1.00	37.43	C
ATOM	696	CG1	VAL	A	93	58.182	34.447	17.106	1.00	35.94	C

TABLE 4

ATOM	697	CG2	VAL	A	93	57.705	36.711	16.162	1.00	36.07	C
ATOM	698	N	HIS	A	94	57.795	32.749	14.042	1.00	40.16	N
ATOM	699	CA	HIS	A	94	57.833	31.301	13.875	1.00	40.66	C
ATOM	700	C	HIS	A	94	58.930	30.881	12.898	1.00	40.13	C
ATOM	701	O	HIS	A	94	59.624	29.888	13.122	1.00	40.44	O
ATOM	702	CB	HIS	A	94	56.466	30.797	13.395	1.00	42.53	C
ATOM	703	CG	HIS	A	94	56.400	29.312	13.209	1.00	43.62	C
ATOM	704	ND1	HIS	A	94	56.844	28.683	12.065	1.00	44.37	N
ATOM	705	CD2	HIS	A	94	55.961	28.331	14.033	1.00	43.39	C
ATOM	706	CE1	HIS	A	94	56.680	27.379	12.191	1.00	44.17	C
ATOM	707	NE2	HIS	A	94	56.146	27.139	13.376	1.00	44.00	N
ATOM	708	N	ALA	A	95	59.092	31.642	11.821	1.00	39.31	N
ATOM	709	CA	ALA	A	95	60.111	31.335	10.825	1.00	38.23	C
ATOM	710	C	ALA	A	95	61.516	31.408	11.425	1.00	38.43	C
ATOM	711	O	ALA	A	95	62.399	30.637	11.055	1.00	38.01	O
ATOM	712	CB	ALA	A	95	59.996	32.298	9.647	1.00	37.20	C
ATOM	713	N	VAL	A	96	61.720	32.341	12.350	1.00	38.46	N
ATOM	714	CA	VAL	A	96	63.019	32.504	12.992	1.00	37.77	C
ATOM	715	C	VAL	A	96	63.293	31.366	13.973	1.00	38.35	C
ATOM	716	O	VAL	A	96	64.383	30.794	13.983	1.00	37.59	O
ATOM	717	CB	VAL	A	96	63.103	33.858	13.748	1.00	37.72	C
ATOM	718	CG1	VAL	A	96	64.417	33.959	14.509	1.00	36.02	C
ATOM	719	CG2	VAL	A	96	62.985	35.009	12.757	1.00	36.81	C
ATOM	720	N	LYS	A	97	62.295	31.040	14.787	1.00	38.94	N
ATOM	721	CA	LYS	A	97	62.426	29.978	15.777	1.00	40.76	C
ATOM	722	C	LYS	A	97	62.607	28.599	15.145	1.00	42.67	C
ATOM	723	O	LYS	A	97	63.211	27.710	15.747	1.00	43.04	O
ATOM	724	CB	LYS	A	97	61.199	29.955	16.697	1.00	39.98	C
ATOM	725	CG	LYS	A	97	60.989	31.227	17.516	1.00	39.03	C
ATOM	726	CD	LYS	A	97	62.189	31.543	18.411	1.00	37.55	C
ATOM	727	CE	LYS	A	97	62.416	30.474	19.472	1.00	36.48	C
ATOM	728	NZ	LYS	A	97	63.663	30.739	20.249	1.00	34.18	N
ATOM	729	N	ASN	A	98	62.091	28.425	13.933	1.00	44.43	N
ATOM	730	CA	ASN	A	98	62.190	27.142	13.247	1.00	46.61	C
ATOM	731	C	ASN	A	98	63.069	27.188	12.005	1.00	46.93	C
ATOM	732	O	ASN	A	98	62.847	26.431	11.059	1.00	48.02	O
ATOM	733	CB	ASN	A	98	60.790	26.656	12.866	1.00	48.75	C
ATOM	734	CG	ASN	A	98	59.921	26.378	14.078	1.00	51.25	C
ATOM	735	OD1	ASN	A	98	58.697	26.390	13.992	1.00	53.69	O
ATOM	736	ND2	ASN	A	98	60.555	26.114	15.214	1.00	53.55	N
ATOM	737	N	PHE	A	99	64.073	28.060	12.007	1.00	46.26	N
ATOM	738	CA	PHE	A	99	64.958	28.182	10.855	1.00	46.28	C
ATOM	739	C	PHE	A	99	65.891	26.987	10.674	1.00	46.62	C
ATOM	740	O	PHE	A	99	66.232	26.634	9.548	1.00	46.35	O
ATOM	741	CB	PHE	A	99	65.799	29.459	10.952	1.00	45.12	C
ATOM	742	CG	PHE	A	99	66.577	29.765	9.699	1.00	44.39	C
ATOM	743	CD1	PHE	A	99	65.918	30.122	8.526	1.00	44.53	C
ATOM	744	CD2	PHE	A	99	67.964	29.690	9.689	1.00	43.94	C
ATOM	745	CE1	PHE	A	99	66.630	30.401	7.362	1.00	44.09	C
ATOM	746	CE2	PHE	A	99	68.685	29.966	8.529	1.00	43.84	C
ATOM	747	CZ	PHE	A	99	68.018	30.323	7.365	1.00	44.07	C
ATOM	748	N	LYS	A	100	66.303	26.368	11.775	1.00	47.68	N
ATOM	749	CA	LYS	A	100	67.214	25.226	11.708	1.00	49.23	C
ATOM	750	C	LYS	A	100	66.519	23.882	11.499	1.00	50.54	C
ATOM	751	O	LYS	A	100	67.165	22.834	11.564	1.00	50.71	O
ATOM	752	CB	LYS	A	100	68.059	25.146	12.980	1.00	48.77	C
ATOM	753	CG	LYS	A	100	68.932	26.364	13.239	1.00	47.96	C

TABLE 4

ATOM	754	CD	LYS A 100	69.709	26.180	14.526	1.00	46.23	C
ATOM	755	CE	LYS A 100	70.672	27.320	14.777	1.00	44.66	C
ATOM	756	NZ	LYS A 100	71.462	27.057	16.006	1.00	43.46	N
ATOM	757	N	ALA A 101	65.212	23.909	11.253	1.00	51.61	N
ATOM	758	CA	ALA A 101	64.447	22.683	11.040	1.00	52.22	C
ATOM	759	C	ALA A 101	64.975	21.911	9.835	1.00	52.77	C
ATOM	760	O	ALA A 101	64.961	22.412	8.711	1.00	53.93	O
ATOM	761	CB	ALA A 101	62.974	23.011	10.840	1.00	52.31	C
ATOM	762	N	HIS A 222	80.602	29.634	17.602	1.00	62.86	N
ATOM	763	CA	HIS A 222	79.850	30.811	17.181	1.00	61.95	C
ATOM	764	C	HIS A 222	79.347	31.556	18.415	1.00	60.27	C
ATOM	765	O	HIS A 222	79.357	31.019	19.526	1.00	60.09	O
ATOM	766	CB	HIS A 222	78.642	30.402	16.323	1.00	64.41	C
ATOM	767	CG	HIS A 222	78.978	29.493	15.179	1.00	67.13	C
ATOM	768	ND1	HIS A 222	78.014	28.948	14.357	1.00	68.00	N
ATOM	769	CD2	HIS A 222	80.165	29.019	14.729	1.00	68.21	C
ATOM	770	CE1	HIS A 222	78.591	28.177	13.452	1.00	68.36	C
ATOM	771	NE2	HIS A 222	79.896	28.202	13.656	1.00	68.83	N
ATOM	772	N	ASN A 223	78.915	32.796	18.220	1.00	57.17	N
ATOM	773	CA	ASN A 223	78.378	33.583	19.319	1.00	53.95	C
ATOM	774	C	ASN A 223	76.882	33.737	19.113	1.00	50.53	C
ATOM	775	O	ASN A 223	76.293	34.746	19.493	1.00	48.94	O
ATOM	776	CB	ASN A 223	79.039	34.960	19.388	1.00	55.72	C
ATOM	777	CG	ASN A 223	80.463	34.895	19.899	1.00	57.65	C
ATOM	778	OD1	ASN A 223	81.380	34.504	19.173	1.00	59.28	O
ATOM	779	ND2	ASN A 223	80.654	35.262	21.161	1.00	57.30	N
ATOM	780	N	GLU A 224	76.275	32.723	18.505	1.00	46.60	N
ATOM	781	CA	GLU A 224	74.843	32.740	18.248	1.00	43.68	C
ATOM	782	C	GLU A 224	74.057	32.795	19.548	1.00	40.12	C
ATOM	783	O	GLU A 224	74.438	32.179	20.542	1.00	38.99	O
ATOM	784	CB	GLU A 224	74.419	31.502	17.449	1.00	44.21	C
ATOM	785	CG	GLU A 224	74.834	30.176	18.074	1.00	46.74	C
ATOM	786	CD	GLU A 224	74.123	28.981	17.454	1.00	47.84	C
ATOM	787	OE1	GLU A 224	73.924	28.977	16.221	1.00	48.39	O
ATOM	788	OE2	GLU A 224	73.775	28.041	18.199	1.00	48.26	O
ATOM	789	N	LEU A 225	72.962	33.546	19.527	1.00	37.30	N
ATOM	790	CA	LEU A 225	72.089	33.681	20.681	1.00	35.11	C
ATOM	791	C	LEU A 225	70.932	32.704	20.479	1.00	34.44	C
ATOM	792	O	LEU A 225	70.088	32.901	19.603	1.00	33.50	O
ATOM	793	CB	LEU A 225	71.561	35.116	20.775	1.00	33.83	C
ATOM	794	CG	LEU A 225	70.675	35.448	21.979	1.00	34.33	C
ATOM	795	CD1	LEU A 225	71.450	35.194	23.274	1.00	34.23	C
ATOM	796	CD2	LEU A 225	70.220	36.899	21.899	1.00	33.89	C
ATOM	797	N	VAL A 226	70.893	31.653	21.292	1.00	34.99	N
ATOM	798	CA	VAL A 226	69.853	30.635	21.169	1.00	35.64	C
ATOM	799	C	VAL A 226	69.235	30.197	22.491	1.00	37.35	C
ATOM	800	O	VAL A 226	69.744	30.516	23.566	1.00	38.20	O
ATOM	801	CB	VAL A 226	70.412	29.372	20.488	1.00	34.80	C
ATOM	802	CG1	VAL A 226	70.890	29.701	19.086	1.00	33.57	C
ATOM	803	CG2	VAL A 226	71.557	28.805	21.325	1.00	34.39	C
ATOM	804	N	ASP A 227	68.128	29.462	22.397	1.00	38.54	N
ATOM	805	CA	ASP A 227	67.453	28.938	23.575	1.00	39.28	C
ATOM	806	C	ASP A 227	67.986	27.529	23.842	1.00	40.76	C
ATOM	807	O	ASP A 227	68.841	27.032	23.103	1.00	39.48	O
ATOM	808	CB	ASP A 227	65.929	28.897	23.374	1.00	39.13	C
ATOM	809	CG	ASP A 227	65.510	28.134	22.123	1.00	39.09	C
ATOM	810	OD1	ASP A 227	66.196	27.164	21.740	1.00	39.60	O

TABLE 4

ATOM	811	OD2	ASP	A	227	64.472	28.498	21.529	1.00	38.30	O
ATOM	812	N	SER	A	228	67.478	26.888	24.891	1.00	43.19	N
ATOM	813	CA	SER	A	228	67.918	25.544	25.262	1.00	45.34	C
ATOM	814	C	SER	A	228	67.723	24.504	24.157	1.00	46.69	C
ATOM	815	O	SER	A	228	68.239	23.388	24.255	1.00	47.84	O
ATOM	816	CB	SER	A	228	67.202	25.088	26.537	1.00	45.27	C
ATOM	817	OG	SER	A	228	65.796	25.143	26.379	1.00	46.27	O
ATOM	818	N	GLN	A	229	66.988	24.868	23.110	1.00	47.37	N
ATOM	819	CA	GLN	A	229	66.746	23.962	21.990	1.00	47.48	C
ATOM	820	C	GLN	A	229	67.631	24.320	20.797	1.00	47.27	C
ATOM	821	O	GLN	A	229	67.433	23.812	19.691	1.00	46.74	O
ATOM	822	CB	GLN	A	229	65.272	24.014	21.573	1.00	48.89	C
ATOM	823	CG	GLN	A	229	64.301	23.525	22.639	1.00	50.86	C
ATOM	824	CD	GLN	A	229	62.849	23.622	22.197	1.00	53.57	C
ATOM	825	OE1	GLN	A	229	62.439	22.989	21.221	1.00	54.79	O
ATOM	826	NE2	GLN	A	229	62.063	24.421	22.913	1.00	54.30	N
ATOM	827	N	LYS	A	230	68.603	25.200	21.032	1.00	46.64	N
ATOM	828	CA	LYS	A	230	69.534	25.642	19.994	1.00	45.65	C
ATOM	829	C	LYS	A	230	68.876	26.513	18.925	1.00	43.41	C
ATOM	830	O	LYS	A	230	69.462	26.758	17.870	1.00	43.63	O
ATOM	831	CB	LYS	A	230	70.199	24.434	19.324	1.00	48.29	C
ATOM	832	CG	LYS	A	230	70.961	23.521	20.277	1.00	52.07	C
ATOM	833	CD	LYS	A	230	72.156	24.222	20.911	1.00	55.27	C
ATOM	834	CE	LYS	A	230	72.890	23.286	21.871	1.00	57.57	C
ATOM	835	NZ	LYS	A	230	74.090	23.919	22.492	1.00	58.56	N
ATOM	836	N	ARG	A	231	67.663	26.982	19.197	1.00	41.68	N
ATOM	837	CA	ARG	A	231	66.947	27.829	18.246	1.00	40.28	C
ATOM	838	C	ARG	A	231	67.277	29.302	18.488	1.00	38.35	C
ATOM	839	O	ARG	A	231	67.386	29.739	19.634	1.00	36.97	O
ATOM	840	CB	ARG	A	231	65.438	27.626	18.386	1.00	41.68	C
ATOM	841	CG	ARG	A	231	64.972	26.186	18.232	1.00	43.64	C
ATOM	842	CD	ARG	A	231	63.472	26.084	18.443	1.00	45.03	C
ATOM	843	NE	ARG	A	231	63.077	26.614	19.746	1.00	46.86	N
ATOM	844	CZ	ARG	A	231	61.817	26.753	20.150	1.00	48.34	C
ATOM	845	NH1	ARG	A	231	60.814	26.402	19.354	1.00	48.72	N
ATOM	846	NH2	ARG	A	231	61.559	27.248	21.355	1.00	49.43	N
ATOM	847	N	TYR	A	232	67.431	30.061	17.406	1.00	36.49	N
ATOM	848	CA	TYR	A	232	67.742	31.483	17.510	1.00	34.28	C
ATOM	849	C	TYR	A	232	66.713	32.225	18.352	1.00	33.16	C
ATOM	850	O	TYR	A	232	65.514	31.959	18.265	1.00	33.82	O
ATOM	851	CB	TYR	A	232	67.791	32.131	16.127	1.00	33.26	C
ATOM	852	CG	TYR	A	232	68.892	31.630	15.232	1.00	32.73	C
ATOM	853	CD1	TYR	A	232	70.213	31.584	15.672	1.00	32.85	C
ATOM	854	CD2	TYR	A	232	68.614	31.215	13.932	1.00	33.54	C
ATOM	855	CE1	TYR	A	232	71.237	31.131	14.830	1.00	33.51	C
ATOM	856	CE2	TYR	A	232	69.620	30.764	13.087	1.00	33.65	C
ATOM	857	CZ	TYR	A	232	70.927	30.724	13.540	1.00	33.53	C
ATOM	858	OH	TYR	A	232	71.910	30.270	12.695	1.00	34.70	O
ATOM	859	N	LEU	A	233	67.186	33.151	19.177	1.00	32.10	N
ATOM	860	CA	LEU	A	233	66.290	33.942	20.008	1.00	31.00	C
ATOM	861	C	LEU	A	233	65.707	35.036	19.132	1.00	29.82	C
ATOM	862	O	LEU	A	233	66.346	35.479	18.175	1.00	29.69	O
ATOM	863	CB	LEU	A	233	67.051	34.571	21.180	1.00	30.50	C
ATOM	864	CG	LEU	A	233	66.828	33.952	22.564	1.00	32.28	C
ATOM	865	CD1	LEU	A	233	66.898	32.442	22.480	1.00	31.52	C
ATOM	866	CD2	LEU	A	233	67.867	34.488	23.542	1.00	30.57	C
ATOM	867	N	VAL	A	234	64.491	35.461	19.446	1.00	28.87	N

TABLE 4

ATOM	868	CA	VAL	A	234	63.855	36.517	18.675	1.00	28.85	C
ATOM	869	C	VAL	A	234	62.872	37.272	19.552	1.00	29.58	C
ATOM	870	O	VAL	A	234	62.257	36.699	20.454	1.00	29.60	O
ATOM	871	CB	VAL	A	234	63.113	35.952	17.431	1.00	28.52	C
ATOM	872	CG1	VAL	A	234	61.924	35.100	17.861	1.00	27.33	C
ATOM	873	CG2	VAL	A	234	62.669	37.091	16.533	1.00	26.42	C
ATOM	874	N	GLY	A	235	62.752	38.571	19.299	1.00	29.15	N
ATOM	875	CA	GLY	A	235	61.835	39.387	20.065	1.00	29.25	C
ATOM	876	C	GLY	A	235	60.701	39.852	19.178	1.00	30.00	C
ATOM	877	O	GLY	A	235	60.745	39.678	17.955	1.00	29.63	O
ATOM	878	N	ALA	A	236	59.680	40.444	19.786	1.00	29.18	N
ATOM	879	CA	ALA	A	236	58.545	40.932	19.023	1.00	29.42	C
ATOM	880	C	ALA	A	236	57.930	42.156	19.681	1.00	28.94	C
ATOM	881	O	ALA	A	236	57.700	42.175	20.887	1.00	30.25	O
ATOM	882	CB	ALA	A	236	57.502	39.828	18.880	1.00	30.04	C
ATOM	883	N	GLY	A	237	57.675	43.185	18.885	1.00	28.85	N
ATOM	884	CA	GLY	A	237	57.072	44.386	19.426	1.00	29.68	C
ATOM	885	C	GLY	A	237	55.565	44.232	19.522	1.00	30.66	C
ATOM	886	O	GLY	A	237	54.957	43.541	18.700	1.00	31.29	O
ATOM	887	N	ILE	A	238	54.969	44.850	20.540	1.00	30.86	N
ATOM	888	CA	ILE	A	238	53.524	44.811	20.734	1.00	31.71	C
ATOM	889	C	ILE	A	238	53.038	46.228	21.055	1.00	32.48	C
ATOM	890	O	ILE	A	238	53.834	47.106	21.385	1.00	31.88	O
ATOM	891	CB	ILE	A	238	53.107	43.869	21.901	1.00	32.49	C
ATOM	892	CG1	ILE	A	238	53.631	44.409	23.233	1.00	32.43	C
ATOM	893	CG2	ILE	A	238	53.626	42.458	21.652	1.00	31.98	C
ATOM	894	CD1	ILE	A	238	53.098	43.658	24.452	1.00	31.48	C
ATOM	895	N	ASN	A	239	51.732	46.451	20.946	1.00	32.65	N
ATOM	896	CA	ASN	A	239	51.171	47.761	21.232	1.00	33.12	C
ATOM	897	C	ASN	A	239	50.172	47.661	22.375	1.00	34.35	C
ATOM	898	O	ASN	A	239	49.801	46.559	22.798	1.00	34.32	O
ATOM	899	CB	ASN	A	239	50.508	48.344	19.977	1.00	33.45	C
ATOM	900	CG	ASN	A	239	49.374	47.478	19.450	1.00	33.90	C
ATOM	901	OD1	ASN	A	239	48.333	47.342	20.090	1.00	33.39	O
ATOM	902	ND2	ASN	A	239	49.576	46.889	18.278	1.00	33.29	N
ATOM	903	N	THR	A	240	49.743	48.810	22.883	1.00	35.36	N
ATOM	904	CA	THR	A	240	48.799	48.847	23.993	1.00	35.80	C
ATOM	905	C	THR	A	240	47.337	48.691	23.576	1.00	37.42	C
ATOM	906	O	THR	A	240	46.444	48.870	24.401	1.00	36.13	O
ATOM	907	CB	THR	A	240	48.923	50.162	24.770	1.00	34.93	C
ATOM	908	OG1	THR	A	240	48.776	51.257	23.859	1.00	34.76	O
ATOM	909	CG2	THR	A	240	50.273	50.252	25.467	1.00	33.70	C
ATOM	910	N	ARG	A	241	47.086	48.349	22.313	1.00	39.17	N
ATOM	911	CA	ARG	A	241	45.707	48.208	21.853	1.00	42.57	C
ATOM	912	C	ARG	A	241	45.212	46.785	21.603	1.00	42.28	C
ATOM	913	O	ARG	A	241	44.262	46.347	22.247	1.00	43.14	O
ATOM	914	CB	ARG	A	241	45.484	49.058	20.598	1.00	45.89	C
ATOM	915	CG	ARG	A	241	45.948	50.498	20.767	1.00	51.37	C
ATOM	916	CD	ARG	A	241	45.095	51.484	19.983	1.00	56.20	C
ATOM	917	NE	ARG	A	241	45.628	52.843	20.084	1.00	60.59	N
ATOM	918	CZ	ARG	A	241	44.928	53.947	19.834	1.00	62.98	C
ATOM	919	NH1	ARG	A	241	43.654	53.862	19.468	1.00	63.64	N
ATOM	920	NH2	ARG	A	241	45.505	55.138	19.945	1.00	64.03	N
ATOM	921	N	ASP	A	242	45.843	46.063	20.682	1.00	41.72	N
ATOM	922	CA	ASP	A	242	45.410	44.698	20.373	1.00	42.47	C
ATOM	923	C	ASP	A	242	46.241	43.591	21.030	1.00	41.62	C
ATOM	924	O	ASP	A	242	46.326	42.488	20.501	1.00	41.70	O

TABLE 4

ATOM	925	CB	ASP	A	242	45.403	44.478	18.853	1.00	42.18	C
ATOM	926	CG	ASP	A	242	46.799	44.528	18.240	1.00	44.11	C
ATOM	927	OD1	ASP	A	242	47.791	44.451	18.998	1.00	43.54	O
ATOM	928	OD2	ASP	A	242	46.903	44.631	16.995	1.00	42.81	O
ATOM	929	N	PHE	A	243	46.830	43.876	22.186	1.00	41.52	N
ATOM	930	CA	PHE	A	243	47.668	42.897	22.878	1.00	41.20	C
ATOM	931	C	PHE	A	243	46.966	41.623	23.352	1.00	42.11	C
ATOM	932	O	PHE	A	243	47.603	40.573	23.467	1.00	42.24	O
ATOM	933	CB	PHE	A	243	48.387	43.565	24.058	1.00	38.57	C
ATOM	934	CG	PHE	A	243	47.465	44.128	25.095	1.00	37.00	C
ATOM	935	CD1	PHE	A	243	46.983	43.327	26.123	1.00	36.77	C
ATOM	936	CD2	PHE	A	243	47.083	45.464	25.051	1.00	36.43	C
ATOM	937	CE1	PHE	A	243	46.136	43.847	27.096	1.00	35.68	C
ATOM	938	CE2	PHE	A	243	46.237	45.996	26.017	1.00	36.27	C
ATOM	939	CZ	PHE	A	243	45.762	45.185	27.044	1.00	36.83	C
ATOM	940	N	ARG	A	244	45.666	41.702	23.623	1.00	43.08	N
ATOM	941	CA	ARG	A	244	44.926	40.526	24.078	1.00	43.54	C
ATOM	942	C	ARG	A	244	44.890	39.447	22.996	1.00	43.52	C
ATOM	943	O	ARG	A	244	44.803	38.257	23.297	1.00	43.24	O
ATOM	944	CB	ARG	A	244	43.502	40.914	24.498	1.00	43.28	C
ATOM	945	CG	ARG	A	244	43.455	41.843	25.705	1.00	43.47	C
ATOM	946	CD	ARG	A	244	42.029	42.095	26.172	1.00	44.74	C
ATOM	947	NE	ARG	A	244	41.971	43.071	27.259	1.00	45.31	N
ATOM	948	CZ	ARG	A	244	42.192	44.376	27.110	1.00	46.31	C
ATOM	949	NH1	ARG	A	244	42.485	44.872	25.914	1.00	44.51	N
ATOM	950	NH2	ARG	A	244	42.123	45.188	28.159	1.00	44.79	N
ATOM	951	N	GLU	A	245	44.960	39.867	21.736	1.00	44.04	N
ATOM	952	CA	GLU	A	245	44.959	38.928	20.618	1.00	44.49	C
ATOM	953	C	GLU	A	245	46.371	38.707	20.078	1.00	43.54	C
ATOM	954	O	GLU	A	245	46.720	37.601	19.665	1.00	43.64	O
ATOM	955	CB	GLU	A	245	44.067	39.439	19.479	1.00	47.18	C
ATOM	956	CG	GLU	A	245	42.599	39.036	19.570	1.00	51.54	C
ATOM	957	CD	GLU	A	245	41.917	39.551	20.822	1.00	54.39	C
ATOM	958	OE1	GLU	A	245	41.972	40.777	21.070	1.00	56.74	O
ATOM	959	OE2	GLU	A	245	41.320	38.730	21.555	1.00	56.12	O
ATOM	960	N	ARG	A	246	47.183	39.761	20.088	1.00	41.72	N
ATOM	961	CA	ARG	A	246	48.547	39.679	19.569	1.00	40.10	C
ATOM	962	C	ARG	A	246	49.529	38.897	20.449	1.00	38.51	C
ATOM	963	O	ARG	A	246	50.305	38.087	19.943	1.00	37.50	O
ATOM	964	CB	ARG	A	246	49.093	41.091	19.314	1.00	39.02	C
ATOM	965	CG	ARG	A	246	50.417	41.125	18.558	1.00	38.76	C
ATOM	966	CD	ARG	A	246	50.877	42.560	18.333	1.00	39.34	C
ATOM	967	NE	ARG	A	246	49.978	43.314	17.460	1.00	37.43	N
ATOM	968	CZ	ARG	A	246	49.985	43.242	16.132	1.00	38.30	C
ATOM	969	NH1	ARG	A	246	50.847	42.450	15.507	1.00	37.21	N
ATOM	970	NH2	ARG	A	246	49.129	43.967	15.422	1.00	39.33	N
ATOM	971	N	VAL	A	247	49.502	39.137	21.756	1.00	37.24	N
ATOM	972	CA	VAL	A	247	50.414	38.440	22.657	1.00	37.34	C
ATOM	973	C	VAL	A	247	50.303	36.918	22.523	1.00	38.18	C
ATOM	974	O	VAL	A	247	51.292	36.251	22.209	1.00	38.12	O
ATOM	975	CB	VAL	A	247	50.185	38.872	24.129	1.00	36.77	C
ATOM	976	CG1	VAL	A	247	51.023	38.026	25.070	1.00	35.70	C
ATOM	977	CG2	VAL	A	247	50.550	40.343	24.293	1.00	37.03	C
ATOM	978	N	PRO	A	248	49.100	36.347	22.747	1.00	38.57	N
ATOM	979	CA	PRO	A	248	48.934	34.892	22.631	1.00	38.12	C
ATOM	980	C	PRO	A	248	49.506	34.329	21.333	1.00	37.59	C
ATOM	981	O	PRO	A	248	50.166	33.293	21.336	1.00	37.87	O

TABLE 4

ATOM	982	CB	PRO	A	248	47.422	34.714	22.729	1.00	38.80	C
ATOM	983	CG	PRO	A	248	47.039	35.791	23.701	1.00	38.59	C
ATOM	984	CD	PRO	A	248	47.840	36.979	23.188	1.00	38.38	C
ATOM	985	N	ALA	A	249	49.256	35.016	20.224	1.00	37.30	N
ATOM	986	CA	ALA	A	249	49.763	34.573	18.932	1.00	38.37	C
ATOM	987	C	ALA	A	249	51.292	34.588	18.923	1.00	39.52	C
ATOM	988	O	ALA	A	249	51.931	33.682	18.379	1.00	38.98	O
ATOM	989	CB	ALA	A	249	49.228	35.471	17.826	1.00	38.41	C
ATOM	990	N	LEU	A	250	51.872	35.625	19.526	1.00	39.58	N
ATOM	991	CA	LEU	A	250	53.322	35.761	19.587	1.00	39.74	C
ATOM	992	C	LEU	A	250	53.935	34.682	20.475	1.00	39.38	C
ATOM	993	O	LEU	A	250	54.951	34.082	20.123	1.00	38.34	O
ATOM	994	CB	LEU	A	250	53.695	37.163	20.092	1.00	39.96	C
ATOM	995	CG	LEU	A	250	54.043	38.222	19.029	1.00	40.83	C
ATOM	996	CD1	LEU	A	250	53.463	37.859	17.678	1.00	39.28	C
ATOM	997	CD2	LEU	A	250	53.540	39.582	19.487	1.00	39.93	C
ATOM	998	N	VAL	A	251	53.310	34.434	21.620	1.00	39.76	N
ATOM	999	CA	VAL	A	251	53.793	33.409	22.537	1.00	41.50	C
ATOM	1000	C	VAL	A	251	53.714	32.055	21.845	1.00	42.53	C
ATOM	1001	O	VAL	A	251	54.690	31.303	21.810	1.00	42.76	O
ATOM	1002	CB	VAL	A	251	52.940	33.354	23.818	1.00	41.62	C
ATOM	1003	CG1	VAL	A	251	53.352	32.161	24.671	1.00	41.89	C
ATOM	1004	CG2	VAL	A	251	53.104	34.644	24.600	1.00	41.93	C
ATOM	1005	N	GLU	A	252	52.541	31.756	21.293	1.00	43.62	N
ATOM	1006	CA	GLU	A	252	52.317	30.500	20.590	1.00	43.74	C
ATOM	1007	C	GLU	A	252	53.332	30.314	19.465	1.00	41.50	C
ATOM	1008	O	GLU	A	252	53.789	29.203	19.215	1.00	41.39	O
ATOM	1009	CB	GLU	A	252	50.893	30.456	20.020	1.00	46.53	C
ATOM	1010	CG	GLU	A	252	49.920	29.576	20.810	1.00	51.69	C
ATOM	1011	CD	GLU	A	252	49.586	30.124	22.193	1.00	54.01	C
ATOM	1012	OE1	GLU	A	252	48.841	31.128	22.279	1.00	53.93	O
ATOM	1013	OE2	GLU	A	252	50.070	29.545	23.194	1.00	55.79	O
ATOM	1014	N	ALA	A	253	53.682	31.404	18.788	1.00	38.82	N
ATOM	1015	CA	ALA	A	253	54.651	31.343	17.698	1.00	36.89	C
ATOM	1016	C	ALA	A	253	56.078	31.102	18.212	1.00	36.24	C
ATOM	1017	O	ALA	A	253	56.968	30.739	17.441	1.00	35.13	O
ATOM	1018	CB	ALA	A	253	54.596	32.622	16.881	1.00	35.91	C
ATOM	1019	N	GLY	A	254	56.292	31.313	19.510	1.00	35.29	N
ATOM	1020	CA	GLY	A	254	57.609	31.085	20.086	1.00	35.95	C
ATOM	1021	C	GLY	A	254	58.480	32.301	20.380	1.00	35.64	C
ATOM	1022	O	GLY	A	254	59.684	32.159	20.578	1.00	35.66	O
ATOM	1023	N	ALA	A	255	57.895	33.493	20.410	1.00	35.20	N
ATOM	1024	CA	ALA	A	255	58.675	34.694	20.697	1.00	33.82	C
ATOM	1025	C	ALA	A	255	59.321	34.554	22.074	1.00	32.75	C
ATOM	1026	O	ALA	A	255	58.653	34.196	23.045	1.00	32.02	O
ATOM	1027	CB	ALA	A	255	57.779	35.922	20.657	1.00	33.94	C
ATOM	1028	N	ASP	A	256	60.621	34.834	22.156	1.00	31.67	N
ATOM	1029	CA	ASP	A	256	61.351	34.723	23.418	1.00	32.02	C
ATOM	1030	C	ASP	A	256	61.145	35.912	24.355	1.00	31.11	C
ATOM	1031	O	ASP	A	256	61.234	35.777	25.574	1.00	30.14	O
ATOM	1032	CB	ASP	A	256	62.841	34.541	23.139	1.00	33.02	C
ATOM	1033	CG	ASP	A	256	63.129	33.275	22.362	1.00	34.81	C
ATOM	1034	OD1	ASP	A	256	63.114	32.188	22.979	1.00	36.54	O
ATOM	1035	OD2	ASP	A	256	63.350	33.365	21.135	1.00	33.32	O
ATOM	1036	N	VAL	A	257	60.871	37.077	23.784	1.00	30.39	N
ATOM	1037	CA	VAL	A	257	60.660	38.271	24.589	1.00	29.66	C
ATOM	1038	C	VAL	A	257	59.823	39.270	23.808	1.00	29.38	C



TABLE 4

ATOM	1039	O	VAL A 257	59.879	39.308	22.582	1.00	28.28	O
ATOM	1040	CB	VAL A 257	62.012	38.911	24.988	1.00	29.16	C
ATOM	1041	CG1	VAL A 257	62.829	39.194	23.747	1.00	29.29	C
ATOM	1042	CG2	VAL A 257	61.782	40.177	25.798	1.00	28.00	C
ATOM	1043	N	LEU A 258	59.038	40.065	24.523	1.00	28.75	N
ATOM	1044	CA	LEU A 258	58.187	41.059	23.886	1.00	29.85	C
ATOM	1045	C	LEU A 258	58.608	42.453	24.344	1.00	29.91	C
ATOM	1046	O	LEU A 258	59.381	42.597	25.293	1.00	30.16	O
ATOM	1047	CB	LEU A 258	56.720	40.823	24.265	1.00	28.53	C
ATOM	1048	CG	LEU A 258	56.167	39.402	24.111	1.00	29.86	C
ATOM	1049	CD1	LEU A 258	54.713	39.397	24.543	1.00	30.36	C
ATOM	1050	CD2	LEU A 258	56.296	38.921	22.670	1.00	28.79	C
ATOM	1051	N	CYS A 259	58.104	43.477	23.663	1.00	29.40	N
ATOM	1052	CA	CYS A 259	58.416	44.850	24.034	1.00	28.72	C
ATOM	1053	C	CYS A 259	57.344	45.795	23.530	1.00	27.77	C
ATOM	1054	O	CYS A 259	57.043	45.820	22.337	1.00	27.16	O
ATOM	1055	CB	CYS A 259	59.772	45.285	23.465	1.00	28.20	C
ATOM	1056	SG	CYS A 259	60.305	46.904	24.092	1.00	28.27	S
ATOM	1057	N	ILE A 260	56.766	46.564	24.446	1.00	28.22	N
ATOM	1058	CA	ILE A 260	55.744	47.533	24.083	1.00	29.67	C
ATOM	1059	C	ILE A 260	56.463	48.683	23.373	1.00	31.98	C
ATOM	1060	O	ILE A 260	57.365	49.308	23.927	1.00	31.74	O
ATOM	1061	CB	ILE A 260	55.010	48.056	25.325	1.00	28.89	C
ATOM	1062	CG1	ILE A 260	54.391	46.877	26.086	1.00	28.30	C
ATOM	1063	CG2	ILE A 260	53.926	49.045	24.912	1.00	26.45	C
ATOM	1064	CD1	ILE A 260	53.791	47.257	27.423	1.00	26.77	C
ATOM	1065	N	ASP A 261	56.045	48.936	22.139	1.00	33.17	N
ATOM	1066	CA	ASP A 261	56.625	49.951	21.267	1.00	35.06	C
ATOM	1067	C	ASP A 261	55.836	51.272	21.315	1.00	35.12	C
ATOM	1068	O	ASP A 261	54.712	51.338	20.820	1.00	36.56	O
ATOM	1069	CB	ASP A 261	56.647	49.349	19.852	1.00	36.45	C
ATOM	1070	CG	ASP A 261	57.248	50.264	18.819	1.00	38.72	C
ATOM	1071	OD1	ASP A 261	58.086	51.109	19.176	1.00	41.12	O
ATOM	1072	OD2	ASP A 261	56.892	50.118	17.630	1.00	41.11	O
ATOM	1073	N	SER A 262	56.420	52.321	21.902	1.00	33.61	N
ATOM	1074	CA	SER A 262	55.729	53.610	22.003	1.00	33.31	C
ATOM	1075	C	SER A 262	56.640	54.837	22.141	1.00	32.60	C
ATOM	1076	O	SER A 262	57.725	54.751	22.711	1.00	32.55	O
ATOM	1077	CB	SER A 262	54.755	53.566	23.185	1.00	34.17	C
ATOM	1078	OG	SER A 262	54.108	54.811	23.367	1.00	33.91	O
ATOM	1079	N	SER A 263	56.185	55.986	21.638	1.00	31.57	N
ATOM	1080	CA	SER A 263	56.976	57.216	21.715	1.00	31.90	C
ATOM	1081	C	SER A 263	56.966	57.806	23.119	1.00	31.13	C
ATOM	1082	O	SER A 263	57.846	58.585	23.483	1.00	32.42	O
ATOM	1083	CB	SER A 263	56.471	58.265	20.709	1.00	32.36	C
ATOM	1084	OG	SER A 263	55.175	58.741	21.027	1.00	34.74	O
ATOM	1085	N	ASP A 264	55.963	57.441	23.905	1.00	29.11	N
ATOM	1086	CA	ASP A 264	55.864	57.918	25.279	1.00	27.37	C
ATOM	1087	C	ASP A 264	55.321	56.786	26.142	1.00	26.83	C
ATOM	1088	O	ASP A 264	54.107	56.594	26.249	1.00	26.56	O
ATOM	1089	CB	ASP A 264	54.960	59.156	25.351	1.00	26.62	C
ATOM	1090	CG	ASP A 264	54.591	59.538	26.778	1.00	25.32	C
ATOM	1091	OD1	ASP A 264	55.309	59.148	27.725	1.00	23.54	O
ATOM	1092	OD2	ASP A 264	53.578	60.243	26.949	1.00	25.29	O
ATOM	1093	N	GLY A 265	56.239	56.036	26.744	1.00	25.91	N
ATOM	1094	CA	GLY A 265	55.868	54.908	27.581	1.00	26.10	C
ATOM	1095	C	GLY A 265	55.421	55.273	28.981	1.00	26.66	C

ATOM	1096	O	GLY A 265	55.005	54.404	29.750	1.00	26.18	O
ATOM	1097	N	PHE A 266	55.514	56.551	29.328	1.00	26.34	N
ATOM	1098	CA	PHE A 266	55.082	56.982	30.650	1.00	26.68	C
ATOM	1099	C	PHE A 266	53.564	57.071	30.531	1.00	27.63	C
ATOM	1100	O	PHE A 266	52.988	58.150	30.606	1.00	26.70	O
ATOM	1101	CB	PHE A 266	55.677	58.352	30.984	1.00	25.83	C
ATOM	1102	CG	PHE A 266	55.781	58.634	32.462	1.00	26.28	C
ATOM	1103	CD1	PHE A 266	55.018	57.915	33.386	1.00	25.02	C
ATOM	1104	CD2	PHE A 266	56.618	59.647	32.927	1.00	25.66	C
ATOM	1105	CE1	PHE A 266	55.083	58.201	34.745	1.00	23.88	C
ATOM	1106	CE2	PHE A 266	56.694	59.946	34.290	1.00	24.67	C
ATOM	1107	CZ	PHE A 266	55.923	59.221	35.202	1.00	26.34	C
ATOM	1108	N	SER A 267	52.924	55.917	30.338	1.00	29.46	N
ATOM	1109	CA	SER A 267	51.477	55.855	30.154	1.00	30.33	C
ATOM	1110	C	SER A 267	50.777	54.748	30.930	1.00	31.43	C
ATOM	1111	O	SER A 267	51.302	53.642	31.087	1.00	29.64	O
ATOM	1112	CB	SER A 267	51.160	55.677	28.670	1.00	30.83	C
ATOM	1113	OG	SER A 267	49.775	55.456	28.462	1.00	33.50	O
ATOM	1114	N	GLU A 268	49.572	55.053	31.394	1.00	32.18	N
ATOM	1115	CA	GLU A 268	48.783	54.087	32.135	1.00	33.83	C
ATOM	1116	C	GLU A 268	48.483	52.896	31.227	1.00	33.76	C
ATOM	1117	O	GLU A 268	48.289	51.778	31.699	1.00	34.08	O
ATOM	1118	CB	GLU A 268	47.481	54.729	32.621	1.00	35.26	C
ATOM	1119	CG	GLU A 268	46.691	53.851	33.573	1.00	39.14	C
ATOM	1120	CD	GLU A 268	45.494	54.561	34.188	1.00	41.79	C
ATOM	1121	OE1	GLU A 268	44.761	53.901	34.961	1.00	43.08	O
ATOM	1122	OE2	GLU A 268	45.286	55.767	33.908	1.00	41.44	O
ATOM	1123	N	TRP A 269	48.458	53.133	29.920	1.00	33.42	N
ATOM	1124	CA	TRP A 269	48.190	52.058	28.972	1.00	34.58	C
ATOM	1125	C	TRP A 269	49.255	50.963	29.027	1.00	34.05	C
ATOM	1126	O	TRP A 269	48.942	49.784	28.846	1.00	33.83	O
ATOM	1127	CB	TRP A 269	48.087	52.602	27.543	1.00	36.69	C
ATOM	1128	CG	TRP A 269	46.919	53.508	27.340	1.00	40.80	C
ATOM	1129	CD1	TRP A 269	46.944	54.869	27.236	1.00	41.67	C
ATOM	1130	CD2	TRP A 269	45.540	53.126	27.268	1.00	42.61	C
ATOM	1131	NE1	TRP A 269	45.667	55.359	27.106	1.00	43.36	N
ATOM	1132	CE2	TRP A 269	44.785	54.311	27.123	1.00	43.31	C
ATOM	1133	CE3	TRP A 269	44.868	51.896	27.315	1.00	43.67	C
ATOM	1134	CZ2	TRP A 269	43.390	54.305	27.024	1.00	44.76	C
ATOM	1135	CZ3	TRP A 269	43.480	51.888	27.216	1.00	44.62	C
ATOM	1136	CH2	TRP A 269	42.757	53.087	27.072	1.00	45.35	C
ATOM	1137	N	GLN A 270	50.510	51.344	29.257	1.00	32.55	N
ATOM	1138	CA	GLN A 270	51.582	50.354	29.343	1.00	32.29	C
ATOM	1139	C	GLN A 270	51.421	49.566	30.641	1.00	31.72	C
ATOM	1140	O	GLN A 270	51.685	48.368	30.686	1.00	31.18	O
ATOM	1141	CB	GLN A 270	52.961	51.025	29.314	1.00	31.01	C
ATOM	1142	CG	GLN A 270	53.207	51.882	28.083	1.00	30.60	C
ATOM	1143	CD	GLN A 270	54.489	51.525	27.357	1.00	30.06	C
ATOM	1144	OE1	GLN A 270	55.390	50.904	27.923	1.00	29.84	O
ATOM	1145	NE2	GLN A 270	54.584	51.932	26.100	1.00	28.50	N
ATOM	1146	N	LYS A 271	50.991	50.246	31.698	1.00	32.14	N
ATOM	1147	CA	LYS A 271	50.782	49.575	32.971	1.00	33.59	C
ATOM	1148	C	LYS A 271	49.694	48.514	32.793	1.00	33.87	C
ATOM	1149	O	LYS A 271	49.838	47.378	33.246	1.00	33.86	O
ATOM	1150	CB	LYS A 271	50.355	50.568	34.051	1.00	33.76	C
ATOM	1151	CG	LYS A 271	50.063	49.894	35.384	1.00	35.01	C
ATOM	1152	CD	LYS A 271	49.834	50.893	36.498	1.00	36.09	C

TABLE 4

ATOM	1153	CE	LYS	A	271	49.709	50.170	37.835	1.00	38.50	C
ATOM	1154	NZ	LYS	A	271	49.561	51.103	38.991	1.00	41.38	N
ATOM	1155	N	ILE	A	272	48.612	48.895	32.121	1.00	33.39	N
ATOM	1156	CA	ILE	A	272	47.501	47.987	31.873	1.00	34.07	C
ATOM	1157	C	ILE	A	272	47.957	46.798	31.034	1.00	33.99	C
ATOM	1158	O	ILE	A	272	47.635	45.653	31.345	1.00	34.22	O
ATOM	1159	CB	ILE	A	272	46.341	48.713	31.145	1.00	33.73	C
ATOM	1160	CG1	ILE	A	272	45.735	49.768	32.074	1.00	34.18	C
ATOM	1161	CG2	ILE	A	272	45.281	47.710	30.707	1.00	33.44	C
ATOM	1162	CD1	ILE	A	272	44.704	50.668	31.413	1.00	34.51	C
ATOM	1163	N	THR	A	273	48.715	47.072	29.977	1.00	33.02	N
ATOM	1164	CA	THR	A	273	49.205	46.013	29.104	1.00	33.58	C
ATOM	1165	C	THR	A	273	50.099	45.011	29.835	1.00	34.00	C
ATOM	1166	O	THR	A	273	49.921	43.800	29.697	1.00	33.77	O
ATOM	1167	CB	THR	A	273	49.986	46.595	27.911	1.00	33.70	C
ATOM	1168	OG1	THR	A	273	49.114	47.426	27.135	1.00	35.34	O
ATOM	1169	CG2	THR	A	273	50.521	45.480	27.025	1.00	32.30	C
ATOM	1170	N	ILE	A	274	51.065	45.512	30.599	1.00	33.72	N
ATOM	1171	CA	ILE	A	274	51.969	44.640	31.340	1.00	33.64	C
ATOM	1172	C	ILE	A	274	51.176	43.843	32.375	1.00	34.72	C
ATOM	1173	O	ILE	A	274	51.414	42.650	32.571	1.00	33.85	O
ATOM	1174	CB	ILE	A	274	53.060	45.451	32.071	1.00	33.60	C
ATOM	1175	CG1	ILE	A	274	53.927	46.194	31.051	1.00	33.18	C
ATOM	1176	CG2	ILE	A	274	53.906	44.521	32.950	1.00	33.23	C
ATOM	1177	CD1	ILE	A	274	54.987	47.089	31.674	1.00	33.18	C
ATOM	1178	N	GLY	A	275	50.231	44.513	33.030	1.00	34.87	N
ATOM	1179	CA	GLY	A	275	49.412	43.860	34.036	1.00	36.02	C
ATOM	1180	C	GLY	A	275	48.617	42.686	33.492	1.00	36.38	C
ATOM	1181	O	GLY	A	275	48.494	41.655	34.147	1.00	37.56	O
ATOM	1182	N	TRP	A	276	48.075	42.846	32.292	1.00	36.26	N
ATOM	1183	CA	TRP	A	276	47.292	41.796	31.656	1.00	36.36	C
ATOM	1184	C	TRP	A	276	48.193	40.601	31.366	1.00	37.31	C
ATOM	1185	O	TRP	A	276	47.788	39.448	31.531	1.00	37.11	O
ATOM	1186	CB	TRP	A	276	46.701	42.307	30.344	1.00	35.76	C
ATOM	1187	CG	TRP	A	276	45.824	41.316	29.656	1.00	36.30	C
ATOM	1188	CD1	TRP	A	276	44.483	41.132	29.850	1.00	35.72	C
ATOM	1189	CD2	TRP	A	276	46.222	40.359	28.665	1.00	35.75	C
ATOM	1190	NE1	TRP	A	276	44.023	40.121	29.038	1.00	35.15	N
ATOM	1191	CE2	TRP	A	276	45.067	39.629	28.301	1.00	35.45	C
ATOM	1192	CE3	TRP	A	276	47.443	40.047	28.050	1.00	35.85	C
ATOM	1193	CZ2	TRP	A	276	45.094	38.607	27.347	1.00	35.33	C
ATOM	1194	CZ3	TRP	A	276	47.471	39.027	27.098	1.00	36.37	C
ATOM	1195	CH2	TRP	A	276	46.300	38.320	26.758	1.00	36.25	C
ATOM	1196	N	ILE	A	277	49.415	40.885	30.926	1.00	36.56	N
ATOM	1197	CA	ILE	A	277	50.370	39.834	30.607	1.00	36.06	C
ATOM	1198	C	ILE	A	277	50.757	39.048	31.857	1.00	37.15	C
ATOM	1199	O	ILE	A	277	50.865	37.824	31.821	1.00	36.69	O
ATOM	1200	CB	ILE	A	277	51.636	40.424	29.942	1.00	34.92	C
ATOM	1201	CG1	ILE	A	277	51.282	40.963	28.550	1.00	34.03	C
ATOM	1202	CG2	ILE	A	277	52.724	39.363	29.837	1.00	34.16	C
ATOM	1203	CD1	ILE	A	277	52.412	41.698	27.863	1.00	32.67	C
ATOM	1204	N	ARG	A	278	50.955	39.756	32.962	1.00	38.15	N
ATOM	1205	CA	ARG	A	278	51.328	39.124	34.220	1.00	40.72	C
ATOM	1206	C	ARG	A	278	50.198	38.278	34.802	1.00	42.31	C
ATOM	1207	O	ARG	A	278	50.445	37.273	35.468	1.00	42.76	O
ATOM	1208	CB	ARG	A	278	51.743	40.189	35.234	1.00	39.40	C
ATOM	1209	CG	ARG	A	278	53.054	40.864	34.911	1.00	38.26	C

TABLE 4

ATOM	1210	CD	ARG	A	278	54.240	39.956	35.206	1.00	37.49	C
ATOM	1211	NE	ARG	A	278	55.493	40.590	34.802	1.00	35.79	N
ATOM	1212	CZ	ARG	A	278	56.192	40.250	33.725	1.00	34.09	C
ATOM	1213	NH1	ARG	A	278	55.774	39.267	32.938	1.00	33.23	N
ATOM	1214	NH2	ARG	A	278	57.298	40.913	33.420	1.00	33.05	N
ATOM	1215	N	GLU	A	279	48.962	38.692	34.543	1.00	44.10	N
ATOM	1216	CA	GLU	A	279	47.785	37.989	35.039	1.00	46.28	C
ATOM	1217	C	GLU	A	279	47.513	36.691	34.282	1.00	45.72	C
ATOM	1218	O	GLU	A	279	46.944	35.752	34.832	1.00	46.12	O
ATOM	1219	CB	GLU	A	279	46.561	38.903	34.944	1.00	48.80	C
ATOM	1220	CG	GLU	A	279	45.260	38.276	35.411	1.00	54.66	C
ATOM	1221	CD	GLU	A	279	44.101	39.259	35.381	1.00	58.25	C
ATOM	1222	OE1	GLU	A	279	43.781	39.778	34.285	1.00	60.30	O
ATOM	1223	OE2	GLU	A	279	43.511	39.515	36.455	1.00	59.99	O
ATOM	1224	N	LYS	A	280	47.927	36.638	33.022	1.00	44.85	N
ATOM	1225	CA	LYS	A	280	47.704	35.454	32.207	1.00	44.61	C
ATOM	1226	C	LYS	A	280	48.924	34.556	32.057	1.00	43.52	C
ATOM	1227	O	LYS	A	280	48.787	33.361	31.808	1.00	44.19	O
ATOM	1228	CB	LYS	A	280	47.212	35.867	30.817	1.00	46.41	C
ATOM	1229	CG	LYS	A	280	47.082	34.709	29.834	1.00	48.70	C
ATOM	1230	CD	LYS	A	280	46.383	35.138	28.550	1.00	50.95	C
ATOM	1231	CE	LYS	A	280	46.292	33.987	27.556	1.00	51.64	C
ATOM	1232	NZ	LYS	A	280	45.625	32.794	28.148	1.00	53.00	N
ATOM	1233	N	TYR	A	281	50.115	35.122	32.217	1.00	41.82	N
ATOM	1234	CA	TYR	A	281	51.338	34.353	32.050	1.00	39.15	C
ATOM	1235	C	TYR	A	281	52.317	34.435	33.216	1.00	38.62	C
ATOM	1236	O	TYR	A	281	53.355	33.773	33.198	1.00	37.75	O
ATOM	1237	CB	TYR	A	281	52.059	34.816	30.787	1.00	38.77	C
ATOM	1238	CG	TYR	A	281	51.280	34.655	29.503	1.00	37.82	C
ATOM	1239	CD1	TYR	A	281	51.167	33.409	28.882	1.00	37.09	C
ATOM	1240	CD2	TYR	A	281	50.693	35.757	28.882	1.00	36.24	C
ATOM	1241	CE1	TYR	A	281	50.498	33.267	27.670	1.00	36.51	C
ATOM	1242	CE2	TYR	A	281	50.019	35.625	27.674	1.00	37.22	C
ATOM	1243	CZ	TYR	A	281	49.928	34.378	27.071	1.00	37.04	C
ATOM	1244	OH	TYR	A	281	49.284	34.247	25.863	1.00	38.46	O
ATOM	1245	N	GLY	A	282	52.002	35.236	34.225	1.00	38.46	N
ATOM	1246	CA	GLY	A	282	52.926	35.370	35.337	1.00	39.34	C
ATOM	1247	C	GLY	A	282	54.249	35.931	34.829	1.00	40.34	C
ATOM	1248	O	GLY	A	282	54.262	36.760	33.919	1.00	38.99	O
ATOM	1249	N	ASP	A	283	55.360	35.479	35.402	1.00	42.07	N
ATOM	1250	CA	ASP	A	283	56.682	35.945	34.990	1.00	44.04	C
ATOM	1251	C	ASP	A	283	57.306	35.069	33.905	1.00	44.08	C
ATOM	1252	O	ASP	A	283	58.510	35.130	33.674	1.00	44.67	O
ATOM	1253	CB	ASP	A	283	57.629	35.994	36.193	1.00	45.90	C
ATOM	1254	CG	ASP	A	283	57.267	37.087	37.180	1.00	49.98	C
ATOM	1255	OD1	ASP	A	283	57.233	38.274	36.777	1.00	51.56	O
ATOM	1256	OD2	ASP	A	283	57.023	36.760	38.363	1.00	52.17	O
ATOM	1257	N	LYS	A	284	56.493	34.260	33.236	1.00	44.69	N
ATOM	1258	CA	LYS	A	284	57.000	33.373	32.191	1.00	45.15	C
ATOM	1259	C	LYS	A	284	57.172	34.086	30.854	1.00	43.68	C
ATOM	1260	O	LYS	A	284	57.955	33.664	30.001	1.00	44.14	O
ATOM	1261	CB	LYS	A	284	56.064	32.171	32.024	1.00	48.63	C
ATOM	1262	CG	LYS	A	284	56.003	31.260	33.249	1.00	53.02	C
ATOM	1263	CD	LYS	A	284	57.377	30.674	33.572	1.00	56.22	C
ATOM	1264	CE	LYS	A	284	57.326	29.736	34.772	1.00	58.58	C
ATOM	1265	NZ	LYS	A	284	58.679	29.181	35.089	1.00	60.63	N
ATOM	1266	N	VAL	A	285	56.425	35.164	30.669	1.00	40.25	N

TABLE 4

ATOM	1267	CA	VAL	A	285	56.514	35.937	29.446	1.00	37.27	C
ATOM	1268	C	VAL	A	285	57.225	37.243	29.773	1.00	35.62	C
ATOM	1269	O	VAL	A	285	56.792	37.997	30.641	1.00	35.11	O
ATOM	1270	CB	VAL	A	285	55.114	36.213	28.874	1.00	37.07	C
ATOM	1271	CG1	VAL	A	285	55.205	37.182	27.706	1.00	35.98	C
ATOM	1272	CG2	VAL	A	285	54.489	34.897	28.418	1.00	37.05	C
ATOM	1273	N	LYS	A	286	58.331	37.494	29.084	1.00	34.12	N
ATOM	1274	CA	LYS	A	286	59.117	38.699	29.311	1.00	31.70	C
ATOM	1275	C	LYS	A	286	58.643	39.823	28.404	1.00	30.65	C
ATOM	1276	O	LYS	A	286	58.443	39.625	27.206	1.00	29.79	O
ATOM	1277	CB	LYS	A	286	60.599	38.411	29.059	1.00	30.46	C
ATOM	1278	CG	LYS	A	286	61.135	37.224	29.847	1.00	30.11	C
ATOM	1279	CD	LYS	A	286	60.902	37.387	31.344	1.00	29.65	C
ATOM	1280	CE	LYS	A	286	61.427	36.183	32.118	1.00	29.40	C
ATOM	1281	NZ	LYS	A	286	61.201	36.319	33.591	1.00	30.72	N
ATOM	1282	N	VAL	A	287	58.469	41.005	28.983	1.00	28.78	N
ATOM	1283	CA	VAL	A	287	58.004	42.154	28.224	1.00	27.93	C
ATOM	1284	C	VAL	A	287	58.722	43.442	28.617	1.00	27.40	C
ATOM	1285	O	VAL	A	287	58.733	43.838	29.784	1.00	26.80	O
ATOM	1286	CB	VAL	A	287	56.463	42.338	28.400	1.00	27.55	C
ATOM	1287	CG1	VAL	A	287	56.102	42.398	29.876	1.00	28.57	C
ATOM	1288	CG2	VAL	A	287	56.002	43.603	27.704	1.00	28.04	C
ATOM	1289	N	GLY	A	288	59.340	44.081	27.630	1.00	28.27	N
ATOM	1290	CA	GLY	A	288	60.031	45.336	27.873	1.00	27.27	C
ATOM	1291	C	GLY	A	288	59.038	46.459	27.644	1.00	27.80	C
ATOM	1292	O	GLY	A	288	58.042	46.263	26.944	1.00	28.16	O
ATOM	1293	N	ALA	A	289	59.293	47.627	28.230	1.00	27.53	N
ATOM	1294	CA	ALA	A	289	58.396	48.771	28.085	1.00	28.35	C
ATOM	1295	C	ALA	A	289	59.171	50.063	27.815	1.00	29.42	C
ATOM	1296	O	ALA	A	289	60.386	50.120	28.021	1.00	29.84	O
ATOM	1297	CB	ALA	A	289	57.543	48.923	29.346	1.00	28.05	C
ATOM	1298	N	GLY	A	290	58.461	51.096	27.364	1.00	28.77	N
ATOM	1299	CA	GLY	A	290	59.096	52.371	27.063	1.00	28.22	C
ATOM	1300	C	GLY	A	290	58.395	53.070	25.905	1.00	28.36	C
ATOM	1301	O	GLY	A	290	57.369	52.588	25.433	1.00	27.76	O
ATOM	1302	N	ASN	A	291	58.942	54.184	25.418	1.00	26.86	N
ATOM	1303	CA	ASN	A	291	60.186	54.766	25.919	1.00	25.60	C
ATOM	1304	C	ASN	A	291	59.985	55.857	26.969	1.00	25.05	C
ATOM	1305	O	ASN	A	291	58.963	56.536	26.987	1.00	25.04	O
ATOM	1306	CB	ASN	A	291	60.973	55.357	24.748	1.00	24.30	C
ATOM	1307	CG	ASN	A	291	61.485	54.298	23.793	1.00	24.09	C
ATOM	1308	OD1	ASN	A	291	60.978	53.180	23.761	1.00	25.26	O
ATOM	1309	ND2	ASN	A	291	62.492	54.651	23.001	1.00	20.96	N
ATOM	1310	N	ILE	A	292	60.965	56.010	27.852	1.00	23.64	N
ATOM	1311	CA	ILE	A	292	60.923	57.054	28.867	1.00	23.62	C
ATOM	1312	C	ILE	A	292	62.290	57.733	28.846	1.00	24.18	C
ATOM	1313	O	ILE	A	292	63.219	57.230	28.200	1.00	24.40	O
ATOM	1314	CB	ILE	A	292	60.583	56.498	30.289	1.00	24.12	C
ATOM	1315	CG1	ILE	A	292	61.395	55.238	30.599	1.00	23.86	C
ATOM	1316	CG2	ILE	A	292	59.093	56.210	30.383	1.00	24.23	C
ATOM	1317	CD1	ILE	A	292	62.865	55.491	30.874	1.00	24.33	C
ATOM	1318	N	VAL	A	293	62.420	58.870	29.528	1.00	22.80	N
ATOM	1319	CA	VAL	A	293	63.686	59.597	29.526	1.00	22.92	C
ATOM	1320	C	VAL	A	293	64.146	60.119	30.876	1.00	23.26	C
ATOM	1321	O	VAL	A	293	65.142	60.840	30.951	1.00	23.53	O
ATOM	1322	CB	VAL	A	293	63.635	60.805	28.561	1.00	22.53	C
ATOM	1323	CG1	VAL	A	293	63.492	60.330	27.122	1.00	21.53	C

ATOM	1324	CG2	VAL	A	293	62.474	61.717	28.943	1.00	21.31	C
ATOM	1325	N	ASP	A	294	63.430	59.779	31.942	1.00	23.20	N
ATOM	1326	CA	ASP	A	294	63.824	60.241	33.269	1.00	23.65	C
ATOM	1327	C	ASP	A	294	63.528	59.203	34.352	1.00	24.09	C
ATOM	1328	O	ASP	A	294	62.885	58.188	34.096	1.00	24.41	O
ATOM	1329	CB	ASP	A	294	63.122	61.570	33.597	1.00	23.02	C
ATOM	1330	CG	ASP	A	294	61.620	61.418	33.778	1.00	24.10	C
ATOM	1331	OD1	ASP	A	294	61.064	60.375	33.376	1.00	26.12	O
ATOM	1332	OD2	ASP	A	294	60.990	62.354	34.312	1.00	25.00	O
ATOM	1333	N	GLY	A	295	64.006	59.467	35.561	1.00	25.18	N
ATOM	1334	CA	GLY	A	295	63.793	58.553	36.669	1.00	25.72	C
ATOM	1335	C	GLY	A	295	62.339	58.246	36.987	1.00	26.61	C
ATOM	1336	O	GLY	A	295	62.016	57.105	37.326	1.00	25.47	O
ATOM	1337	N	GLU	A	296	61.463	59.249	36.894	1.00	27.36	N
ATOM	1338	CA	GLU	A	296	60.042	59.049	37.184	1.00	28.17	C
ATOM	1339	C	GLU	A	296	59.417	58.064	36.214	1.00	26.97	C
ATOM	1340	O	GLU	A	296	58.684	57.166	36.620	1.00	26.88	O
ATOM	1341	CB	GLU	A	296	59.261	60.367	37.103	1.00	31.11	C
ATOM	1342	CG	GLU	A	296	59.579	61.376	38.182	1.00	37.71	C
ATOM	1343	CD	GLU	A	296	58.622	62.567	38.160	1.00	43.64	C
ATOM	1344	OE1	GLU	A	296	58.943	63.589	38.808	1.00	45.94	O
ATOM	1345	OE2	GLU	A	296	57.550	62.482	37.503	1.00	44.55	O
ATOM	1346	N	GLY	A	297	59.695	58.251	34.928	1.00	26.28	N
ATOM	1347	CA	GLY	A	297	59.151	57.363	33.917	1.00	26.08	C
ATOM	1348	C	GLY	A	297	59.661	55.944	34.094	1.00	25.81	C
ATOM	1349	O	GLY	A	297	58.910	54.984	33.932	1.00	26.85	O
ATOM	1350	N	PHE	A	298	60.945	55.813	34.415	1.00	25.29	N
ATOM	1351	CA	PHE	A	298	61.554	54.506	34.639	1.00	25.86	C
ATOM	1352	C	PHE	A	298	60.856	53.815	35.805	1.00	26.44	C
ATOM	1353	O	PHE	A	298	60.461	52.656	35.712	1.00	26.85	O
ATOM	1354	CB	PHE	A	298	63.040	54.655	34.988	1.00	25.61	C
ATOM	1355	CG	PHE	A	298	63.640	53.410	35.585	1.00	25.67	C
ATOM	1356	CD1	PHE	A	298	64.139	52.398	34.771	1.00	24.15	C
ATOM	1357	CD2	PHE	A	298	63.627	53.214	36.964	1.00	24.54	C
ATOM	1358	CE1	PHE	A	298	64.611	51.202	35.325	1.00	24.57	C
ATOM	1359	CE2	PHE	A	298	64.093	52.025	37.524	1.00	24.83	C
ATOM	1360	CZ	PHE	A	298	64.584	51.017	36.701	1.00	23.36	C
ATOM	1361	N	ARG	A	299	60.733	54.553	36.905	1.00	27.12	N
ATOM	1362	CA	ARG	A	299	60.110	54.089	38.143	1.00	29.07	C
ATOM	1363	C	ARG	A	299	58.680	53.603	37.910	1.00	29.11	C
ATOM	1364	O	ARG	A	299	58.275	52.554	38.420	1.00	28.93	O
ATOM	1365	CB	ARG	A	299	60.136	55.235	39.162	1.00	30.82	C
ATOM	1366	CG	ARG	A	299	59.233	55.085	40.370	1.00	35.20	C
ATOM	1367	CD	ARG	A	299	59.914	54.374	41.518	1.00	38.25	C
ATOM	1368	NE	ARG	A	299	61.166	55.010	41.934	1.00	39.66	N
ATOM	1369	CZ	ARG	A	299	61.900	54.581	42.959	1.00	40.55	C
ATOM	1370	NH1	ARG	A	299	61.497	53.533	43.662	1.00	39.93	N
ATOM	1371	NH2	ARG	A	299	63.045	55.173	43.270	1.00	40.75	N
ATOM	1372	N	TYR	A	300	57.912	54.363	37.139	1.00	28.00	N
ATOM	1373	CA	TYR	A	300	56.542	53.973	36.853	1.00	27.38	C
ATOM	1374	C	TYR	A	300	56.486	52.639	36.113	1.00	27.60	C
ATOM	1375	O	TYR	A	300	55.658	51.793	36.424	1.00	27.82	O
ATOM	1376	CB	TYR	A	300	55.841	55.033	36.006	1.00	25.95	C
ATOM	1377	CG	TYR	A	300	54.385	54.714	35.739	1.00	25.23	C
ATOM	1378	CD1	TYR	A	300	53.410	54.933	36.716	1.00	24.39	C
ATOM	1379	CD2	TYR	A	300	53.984	54.183	34.516	1.00	24.30	C
ATOM	1380	CE1	TYR	A	300	52.069	54.631	36.477	1.00	23.68	C

TABLE 4

ATOM	1381	CE2	TYR	A	300	52.650	53.875	34.268	1.00	25.86	C
ATOM	1382	CZ	TYR	A	300	51.698	54.104	35.252	1.00	24.81	C
ATOM	1383	OH	TYR	A	300	50.379	53.810	34.995	1.00	24.58	O
ATOM	1384	N	LEU	A	301	57.355	52.454	35.124	1.00	27.28	N
ATOM	1385	CA	LEU	A	301	57.339	51.210	34.369	1.00	27.52	C
ATOM	1386	C	LEU	A	301	57.922	50.044	35.168	1.00	27.98	C
ATOM	1387	O	LEU	A	301	57.539	48.896	34.968	1.00	28.58	O
ATOM	1388	CB	LEU	A	301	58.078	51.386	33.036	1.00	25.33	C
ATOM	1389	CG	LEU	A	301	57.369	52.305	32.024	1.00	25.53	C
ATOM	1390	CD1	LEU	A	301	58.189	52.409	30.741	1.00	20.77	C
ATOM	1391	CD2	LEU	A	301	55.979	51.756	31.714	1.00	23.64	C
ATOM	1392	N	ALA	A	302	58.837	50.340	36.081	1.00	28.68	N
ATOM	1393	CA	ALA	A	302	59.437	49.301	36.911	1.00	29.55	C
ATOM	1394	C	ALA	A	302	58.365	48.740	37.852	1.00	29.73	C
ATOM	1395	O	ALA	A	302	58.159	47.528	37.925	1.00	29.99	O
ATOM	1396	CB	ALA	A	302	60.607	49.877	37.714	1.00	27.04	C
ATOM	1397	N	ASP	A	303	57.679	49.624	38.565	1.00	30.56	N
ATOM	1398	CA	ASP	A	303	56.625	49.193	39.474	1.00	31.48	C
ATOM	1399	C	ASP	A	303	55.527	48.474	38.704	1.00	32.09	C
ATOM	1400	O	ASP	A	303	54.836	47.620	39.256	1.00	33.91	O
ATOM	1401	CB	ASP	A	303	56.013	50.381	40.218	1.00	31.91	C
ATOM	1402	CG	ASP	A	303	56.947	50.968	41.254	1.00	33.42	C
ATOM	1403	OD1	ASP	A	303	57.869	50.253	41.701	1.00	34.40	O
ATOM	1404	OD2	ASP	A	303	56.743	52.139	41.639	1.00	34.93	O
ATOM	1405	N	ALA	A	304	55.358	48.828	37.434	1.00	31.62	N
ATOM	1406	CA	ALA	A	304	54.336	48.198	36.605	1.00	30.73	C
ATOM	1407	C	ALA	A	304	54.723	46.759	36.239	1.00	30.76	C
ATOM	1408	O	ALA	A	304	53.873	45.969	35.823	1.00	30.18	O
ATOM	1409	CB	ALA	A	304	54.103	49.020	35.346	1.00	30.45	C
ATOM	1410	N	GLY	A	305	56.007	46.425	36.379	1.00	29.89	N
ATOM	1411	CA	GLY	A	305	56.452	45.069	36.086	1.00	28.06	C
ATOM	1412	C	GLY	A	305	57.299	44.817	34.850	1.00	28.84	C
ATOM	1413	O	GLY	A	305	57.596	43.661	34.535	1.00	28.23	O
ATOM	1414	N	ALA	A	306	57.695	45.873	34.144	1.00	28.22	N
ATOM	1415	CA	ALA	A	306	58.510	45.719	32.937	1.00	27.85	C
ATOM	1416	C	ALA	A	306	59.772	44.889	33.206	1.00	27.06	C
ATOM	1417	O	ALA	A	306	60.378	45.010	34.270	1.00	26.25	O
ATOM	1418	CB	ALA	A	306	58.896	47.094	32.399	1.00	28.08	C
ATOM	1419	N	ASP	A	307	60.157	44.049	32.244	1.00	27.17	N
ATOM	1420	CA	ASP	A	307	61.350	43.201	32.374	1.00	27.07	C
ATOM	1421	C	ASP	A	307	62.618	43.950	31.946	1.00	27.21	C
ATOM	1422	O	ASP	A	307	63.737	43.546	32.259	1.00	27.56	O
ATOM	1423	CB	ASP	A	307	61.178	41.918	31.553	1.00	26.85	C
ATOM	1424	CG	ASP	A	307	60.190	40.954	32.187	1.00	29.12	C
ATOM	1425	OD1	ASP	A	307	60.488	40.450	33.290	1.00	29.15	O
ATOM	1426	OD2	ASP	A	307	59.116	40.709	31.592	1.00	29.54	O
ATOM	1427	N	PHE	A	308	62.424	45.021	31.189	1.00	26.81	N
ATOM	1428	CA	PHE	A	308	63.507	45.896	30.771	1.00	26.08	C
ATOM	1429	C	PHE	A	308	62.823	47.180	30.314	1.00	26.24	C
ATOM	1430	O	PHE	A	308	61.677	47.158	29.871	1.00	25.83	O
ATOM	1431	CB	PHE	A	308	64.416	45.245	29.703	1.00	25.02	C
ATOM	1432	CG	PHE	A	308	63.879	45.264	28.291	1.00	24.83	C
ATOM	1433	CD1	PHE	A	308	63.847	46.447	27.552	1.00	24.91	C
ATOM	1434	CD2	PHE	A	308	63.492	44.076	27.671	1.00	24.33	C
ATOM	1435	CE1	PHE	A	308	63.443	46.449	26.210	1.00	24.84	C
ATOM	1436	CE2	PHE	A	308	63.085	44.062	26.330	1.00	25.69	C
ATOM	1437	CZ	PHE	A	308	63.062	45.255	25.597	1.00	25.81	C

TABLE 4

ATOM	1438	N	ILE A 309	63.503	48.305	30.484	1.00	25.90	N
ATOM	1439	CA	ILE A 309	62.928	49.591	30.130	1.00	25.03	C
ATOM	1440	C	ILE A 309	63.754	50.294	29.053	1.00	24.57	C
ATOM	1441	O	ILE A 309	64.976	50.407	29.160	1.00	24.32	O
ATOM	1442	CB	ILE A 309	62.784	50.445	31.414	1.00	25.42	C
ATOM	1443	CG1	ILE A 309	61.756	49.763	32.331	1.00	22.98	C
ATOM	1444	CG2	ILE A 309	62.390	51.891	31.072	1.00	24.21	C
ATOM	1445	CD1	ILE A 309	61.674	50.320	33.740	1.00	22.68	C
ATOM	1446	N	LYS A 310	63.068	50.750	28.009	1.00	24.43	N
ATOM	1447	CA	LYS A 310	63.713	51.396	26.877	1.00	24.50	C
ATOM	1448	C	LYS A 310	63.785	52.921	27.042	1.00	24.35	C
ATOM	1449	O	LYS A 310	62.786	53.583	27.334	1.00	23.81	O
ATOM	1450	CB	LYS A 310	62.970	51.000	25.598	1.00	24.83	C
ATOM	1451	CG	LYS A 310	63.793	51.071	24.336	1.00	24.74	C
ATOM	1452	CD	LYS A 310	63.473	49.906	23.401	1.00	24.26	C
ATOM	1453	CE	LYS A 310	62.069	49.994	22.836	1.00	24.22	C
ATOM	1454	NZ	LYS A 310	61.904	51.272	22.092	1.00	23.28	N
ATOM	1455	N	ILE A 311	64.986	53.459	26.851	1.00	23.88	N
ATOM	1456	CA	ILE A 311	65.252	54.890	27.009	1.00	23.05	C
ATOM	1457	C	ILE A 311	65.399	55.641	25.693	1.00	23.48	C
ATOM	1458	O	ILE A 311	66.113	55.194	24.792	1.00	22.99	O
ATOM	1459	CB	ILE A 311	66.562	55.118	27.804	1.00	21.85	C
ATOM	1460	CG1	ILE A 311	66.503	54.367	29.137	1.00	19.66	C
ATOM	1461	CG2	ILE A 311	66.782	56.619	28.037	1.00	19.08	C
ATOM	1462	CD1	ILE A 311	67.858	54.239	29.821	1.00	19.70	C
ATOM	1463	N	GLY A 312	64.730	56.785	25.582	1.00	23.63	N
ATOM	1464	CA	GLY A 312	64.871	57.569	24.374	1.00	24.66	C
ATOM	1465	C	GLY A 312	63.644	58.103	23.669	1.00	26.40	C
ATOM	1466	O	GLY A 312	62.771	57.350	23.240	1.00	25.18	O
ATOM	1467	N	ILE A 313	63.595	59.426	23.553	1.00	28.70	N
ATOM	1468	CA	ILE A 313	62.527	60.128	22.854	1.00	31.54	C
ATOM	1469	C	ILE A 313	63.184	61.309	22.152	1.00	35.25	C
ATOM	1470	O	ILE A 313	63.698	62.216	22.811	1.00	33.97	O
ATOM	1471	CB	ILE A 313	61.450	60.678	23.812	1.00	30.50	C
ATOM	1472	CG1	ILE A 313	60.739	59.528	24.529	1.00	29.70	C
ATOM	1473	CG2	ILE A 313	60.438	61.498	23.021	1.00	30.02	C
ATOM	1474	CD1	ILE A 313	59.794	59.984	25.624	1.00	27.55	C
ATOM	1475	N	GLY A 314	63.190	61.283	20.823	1.00	40.22	N
ATOM	1476	CA	GLY A 314	63.780	62.372	20.065	1.00	47.64	C
ATOM	1477	C	GLY A 314	65.152	62.121	19.458	1.00	53.44	C
ATOM	1478	O	GLY A 314	65.474	62.660	18.392	1.00	54.62	O
ATOM	1479	N	GLY A 315	65.965	61.306	20.125	1.00	57.31	N
ATOM	1480	CA	GLY A 315	67.304	61.024	19.632	1.00	62.24	C
ATOM	1481	C	GLY A 315	67.422	60.395	18.251	1.00	65.54	C
ATOM	1482	O	GLY A 315	68.347	60.724	17.509	1.00	66.23	O
ATOM	1483	N	GLY A 316	66.499	59.497	17.906	1.00	68.35	N
ATOM	1484	CA	GLY A 316	66.534	58.826	16.611	1.00	71.80	C
ATOM	1485	C	GLY A 316	66.996	59.648	15.415	1.00	74.31	C
ATOM	1486	O	GLY A 316	66.889	60.875	15.413	1.00	74.26	O
ATOM	1487	N	SER A 317	67.505	58.968	14.388	1.00	76.73	N
ATOM	1488	CA	SER A 317	67.989	59.635	13.178	1.00	79.34	C
ATOM	1489	C	SER A 317	66.831	60.196	12.357	1.00	81.34	C
ATOM	1490	O	SER A 317	66.887	61.330	11.879	1.00	81.51	O
ATOM	1491	CB	SER A 317	68.799	58.663	12.314	1.00	79.01	C
ATOM	1492	OG	SER A 317	67.969	57.683	11.719	1.00	78.20	O
ATOM	1493	N	ILE A 318	65.789	59.387	12.189	1.00	83.77	N
ATOM	1494	CA	ILE A 318	64.602	59.797	11.444	1.00	86.14	C



TABLE 4

ATOM	1495	C	ILE A 318	63.663	60.558	12.371	1.00	87.68	C
ATOM	1496	O	ILE A 318	62.441	60.481	12.236	1.00	87.87	O
ATOM	1497	CB	ILE A 318	63.845	58.575	10.866	1.00	85.84	C
ATOM	1498	CG1	ILE A 318	64.062	57.346	11.756	1.00	85.74	C
ATOM	1499	CG2	ILE A 318	64.323	58.291	9.448	1.00	86.18	C
ATOM	1500	CD1	ILE A 318	63.713	57.544	13.210	1.00	84.97	C
ATOM	1501	N	CYS A 319	64.250	61.293	13.312	1.00	89.77	N
ATOM	1502	CA	CYS A 319	63.484	62.064	14.282	1.00	91.80	C
ATOM	1503	C	CYS A 319	63.660	63.571	14.135	1.00	92.66	C
ATOM	1504	O	CYS A 319	64.776	64.090	14.207	1.00	92.78	O
ATOM	1505	CB	CYS A 319	63.878	61.660	15.703	1.00	92.28	C
ATOM	1506	SG	CYS A 319	63.009	62.593	16.985	1.00	94.56	S
ATOM	1507	N	ILE A 320	62.545	64.268	13.937	1.00	93.64	N
ATOM	1508	CA	ILE A 320	62.552	65.720	13.800	1.00	94.66	C
ATOM	1509	C	ILE A 320	61.771	66.290	14.988	1.00	94.85	C
ATOM	1510	O	ILE A 320	60.809	67.041	14.814	1.00	95.16	O
ATOM	1511	CB	ILE A 320	61.876	66.165	12.473	1.00	95.15	C
ATOM	1512	CG1	ILE A 320	62.418	65.339	11.299	1.00	95.39	C
ATOM	1513	CG2	ILE A 320	62.132	67.649	12.226	1.00	94.99	C
ATOM	1514	CD1	ILE A 320	63.920	65.452	11.086	1.00	95.47	C
ATOM	1515	N	THR A 321	62.200	65.913	16.193	1.00	94.85	N
ATOM	1516	CA	THR A 321	61.572	66.338	17.446	1.00	94.56	C
ATOM	1517	C	THR A 321	60.932	67.723	17.389	1.00	94.12	C
ATOM	1518	O	THR A 321	59.744	67.876	17.683	1.00	93.67	O
ATOM	1519	CB	THR A 321	62.590	66.322	18.606	1.00	94.80	C
ATOM	1520	OG1	THR A 321	63.228	65.040	18.664	1.00	94.77	O
ATOM	1521	CG2	THR A 321	61.891	66.588	19.931	1.00	94.58	C
ATOM	1522	N	ARG A 322	61.721	68.730	17.022	1.00	93.60	N
ATOM	1523	CA	ARG A 322	61.208	70.091	16.926	1.00	92.93	C
ATOM	1524	C	ARG A 322	59.929	70.126	16.098	1.00	91.61	C
ATOM	1525	O	ARG A 322	58.860	70.457	16.611	1.00	91.89	O
ATOM	1526	CB	ARG A 322	62.250	71.025	16.301	1.00	93.99	C
ATOM	1527	CG	ARG A 322	63.301	71.546	17.274	1.00	95.47	C
ATOM	1528	CD	ARG A 322	64.337	70.495	17.640	1.00	96.98	C
ATOM	1529	NE	ARG A 322	65.319	71.030	18.583	1.00	98.14	N
ATOM	1530	CZ	ARG A 322	66.530	70.517	18.784	1.00	98.80	C
ATOM	1531	NH1	ARG A 322	66.925	69.448	18.105	1.00	98.87	N
ATOM	1532	NH2	ARG A 322	67.348	71.079	19.663	1.00	99.15	N
ATOM	1533	N	GLU A 323	60.036	69.778	14.820	1.00	89.52	N
ATOM	1534	CA	GLU A 323	58.871	69.778	13.946	1.00	87.37	C
ATOM	1535	C	GLU A 323	57.958	68.588	14.247	1.00	84.86	C
ATOM	1536	O	GLU A 323	57.628	67.795	13.361	1.00	84.93	O
ATOM	1537	CB	GLU A 323	59.311	69.757	12.478	1.00	88.77	C
ATOM	1538	CG	GLU A 323	58.163	69.856	11.473	1.00	90.52	C
ATOM	1539	CD	GLU A 323	57.281	71.080	11.689	1.00	91.42	C
ATOM	1540	OE1	GLU A 323	56.303	71.245	10.927	1.00	91.57	O
ATOM	1541	OE2	GLU A 323	57.560	71.875	12.615	1.00	91.76	O
ATOM	1542	N	GLN A 324	57.553	68.473	15.509	1.00	81.41	N
ATOM	1543	CA	GLN A 324	56.676	67.393	15.944	1.00	77.43	C
ATOM	1544	C	GLN A 324	55.848	67.831	17.153	1.00	73.46	C
ATOM	1545	O	GLN A 324	54.919	68.630	17.018	1.00	73.89	O
ATOM	1546	CB	GLN A 324	57.503	66.146	16.289	1.00	79.24	C
ATOM	1547	CG	GLN A 324	56.677	64.923	16.679	1.00	81.03	C
ATOM	1548	CD	GLN A 324	55.595	64.599	15.665	1.00	82.58	C
ATOM	1549	OE1	GLN A 324	55.867	64.472	14.471	1.00	83.19	O
ATOM	1550	NE2	GLN A 324	54.359	64.463	16.137	1.00	83.06	N
ATOM	1551	N	LYS A 325	56.191	67.312	18.329	1.00	67.65	N

TABLE 4

ATOM	1552	CA	LYS A 325	55.476	67.644	19.556	1.00	61.35	C
ATOM	1553	C	LYS A 325	56.326	68.484	20.492	1.00	56.32	C
ATOM	1554	O	LYS A 325	55.807	69.147	21.391	1.00	55.43	O
ATOM	1555	CB	LYS A 325	55.056	66.375	20.299	1.00	62.67	C
ATOM	1556	CG	LYS A 325	53.889	65.612	19.697	1.00	63.57	C
ATOM	1557	CD	LYS A 325	53.512	64.469	20.624	1.00	64.06	C
ATOM	1558	CE	LYS A 325	52.278	63.738	20.158	1.00	64.95	C
ATOM	1559	NZ	LYS A 325	51.932	62.638	21.100	1.00	65.54	N
ATOM	1560	N	GLY A 326	57.636	68.444	20.292	1.00	50.41	N
ATOM	1561	CA	GLY A 326	58.515	69.204	21.152	1.00	44.73	C
ATOM	1562	C	GLY A 326	58.777	68.502	22.473	1.00	41.12	C
ATOM	1563	O	GLY A 326	59.036	69.151	23.484	1.00	38.92	O
ATOM	1564	N	ILE A 327	58.684	67.174	22.474	1.00	37.83	N
ATOM	1565	CA	ILE A 327	58.954	66.403	23.680	1.00	34.93	C
ATOM	1566	C	ILE A 327	60.248	65.627	23.449	1.00	32.50	C
ATOM	1567	O	ILE A 327	60.556	65.229	22.329	1.00	30.63	O
ATOM	1568	CB	ILE A 327	57.807	65.406	24.022	1.00	35.16	C
ATOM	1569	CG1	ILE A 327	57.684	64.340	22.936	1.00	35.16	C
ATOM	1570	CG2	ILE A 327	56.485	66.157	24.169	1.00	36.07	C
ATOM	1571	CD1	ILE A 327	56.624	63.273	23.233	1.00	37.60	C
ATOM	1572	N	GLY A 328	61.018	65.429	24.507	1.00	30.83	N
ATOM	1573	CA	GLY A 328	62.257	64.695	24.351	1.00	30.46	C
ATOM	1574	C	GLY A 328	63.331	65.116	25.326	1.00	28.07	C
ATOM	1575	O	GLY A 328	63.087	65.907	26.241	1.00	26.85	O
ATOM	1576	N	ARG A 329	64.531	64.587	25.121	1.00	27.11	N
ATOM	1577	CA	ARG A 329	65.650	64.897	25.991	1.00	25.00	C
ATOM	1578	C	ARG A 329	66.912	64.341	25.355	1.00	24.52	C
ATOM	1579	O	ARG A 329	66.866	63.282	24.728	1.00	24.57	O
ATOM	1580	CB	ARG A 329	65.426	64.243	27.356	1.00	25.02	C
ATOM	1581	CG	ARG A 329	66.250	64.828	28.486	1.00	23.52	C
ATOM	1582	CD	ARG A 329	66.101	63.994	29.745	1.00	23.12	C
ATOM	1583	NE	ARG A 329	66.454	64.757	30.935	1.00	23.07	N
ATOM	1584	CZ	ARG A 329	66.352	64.300	32.177	1.00	24.79	C
ATOM	1585	NH1	ARG A 329	65.909	63.067	32.402	1.00	25.05	N
ATOM	1586	NH2	ARG A 329	66.670	65.086	33.198	1.00	23.95	N
ATOM	1587	N	GLY A 330	68.031	65.053	25.502	1.00	22.80	N
ATOM	1588	CA	GLY A 330	69.281	64.560	24.952	1.00	21.71	C
ATOM	1589	C	GLY A 330	69.466	63.134	25.449	1.00	22.12	C
ATOM	1590	O	GLY A 330	69.269	62.856	26.635	1.00	21.20	O
ATOM	1591	N	GLN A 331	69.844	62.230	24.552	1.00	22.96	N
ATOM	1592	CA	GLN A 331	70.005	60.824	24.900	1.00	23.04	C
ATOM	1593	C	GLN A 331	70.969	60.550	26.054	1.00	23.91	C
ATOM	1594	O	GLN A 331	70.689	59.699	26.901	1.00	24.69	O
ATOM	1595	CB	GLN A 331	70.440	60.023	23.670	1.00	23.45	C
ATOM	1596	CG	GLN A 331	70.322	58.504	23.848	1.00	23.57	C
ATOM	1597	CD	GLN A 331	68.876	58.025	23.890	1.00	26.07	C
ATOM	1598	OE1	GLN A 331	68.595	56.889	24.278	1.00	28.19	O
ATOM	1599	NE2	GLN A 331	67.954	58.887	23.483	1.00	23.86	N
ATOM	1600	N	ALA A 332	72.098	61.256	26.096	1.00	22.41	N
ATOM	1601	CA	ALA A 332	73.068	61.042	27.169	1.00	22.13	C
ATOM	1602	C	ALA A 332	72.460	61.375	28.529	1.00	21.81	C
ATOM	1603	O	ALA A 332	72.528	60.581	29.472	1.00	20.89	O
ATOM	1604	CB	ALA A 332	74.326	61.886	26.928	1.00	21.50	C
ATOM	1605	N	THR A 333	71.857	62.553	28.626	1.00	20.86	N
ATOM	1606	CA	THR A 333	71.239	62.979	29.867	1.00	21.05	C
ATOM	1607	C	THR A 333	70.148	61.998	30.276	1.00	22.50	C
ATOM	1608	O	THR A 333	70.013	61.668	31.456	1.00	22.49	O

TABLE 4

ATOM	1609	CB	THR	A	333	70.622	64.384	29.730	1.00	20.97	C
ATOM	1610	OG1	THR	A	333	71.643	65.308	29.334	1.00	19.27	O
ATOM	1611	CG2	THR	A	333	70.023	64.839	31.069	1.00	20.51	C
ATOM	1612	N	ALA	A	334	69.378	61.529	29.297	1.00	21.69	N
ATOM	1613	CA	ALA	A	334	68.299	60.583	29.568	1.00	22.09	C
ATOM	1614	C	ALA	A	334	68.835	59.278	30.163	1.00	21.26	C
ATOM	1615	O	ALA	A	334	68.314	58.780	31.160	1.00	22.26	O
ATOM	1616	CB	ALA	A	334	67.521	60.290	28.281	1.00	20.13	C
ATOM	1617	N	VAL	A	335	69.866	58.721	29.539	1.00	22.35	N
ATOM	1618	CA	VAL	A	335	70.458	57.469	30.010	1.00	22.27	C
ATOM	1619	C	VAL	A	335	71.061	57.628	31.404	1.00	22.75	C
ATOM	1620	O	VAL	A	335	70.810	56.814	32.298	1.00	24.25	O
ATOM	1621	CB	VAL	A	335	71.561	56.965	29.041	1.00	22.72	C
ATOM	1622	CG1	VAL	A	335	72.273	55.739	29.639	1.00	23.71	C
ATOM	1623	CG2	VAL	A	335	70.945	56.602	27.702	1.00	21.59	C
ATOM	1624	N	ILE	A	336	71.848	58.680	31.590	1.00	22.45	N
ATOM	1625	CA	ILE	A	336	72.489	58.930	32.876	1.00	22.52	C
ATOM	1626	C	ILE	A	336	71.465	59.051	34.004	1.00	23.41	C
ATOM	1627	O	ILE	A	336	71.662	58.518	35.095	1.00	22.49	O
ATOM	1628	CB	ILE	A	336	73.349	60.217	32.817	1.00	21.60	C
ATOM	1629	CG1	ILE	A	336	74.548	59.985	31.890	1.00	19.73	C
ATOM	1630	CG2	ILE	A	336	73.804	60.623	34.220	1.00	18.66	C
ATOM	1631	CD1	ILE	A	336	75.364	61.233	31.615	1.00	21.73	C
ATOM	1632	N	ASP	A	337	70.364	59.742	33.730	1.00	24.43	N
ATOM	1633	CA	ASP	A	337	69.319	59.938	34.729	1.00	24.42	C
ATOM	1634	C	ASP	A	337	68.550	58.646	35.026	1.00	24.54	C
ATOM	1635	O	ASP	A	337	68.294	58.317	36.186	1.00	23.43	O
ATOM	1636	CB	ASP	A	337	68.364	61.038	34.260	1.00	25.94	C
ATOM	1637	CG	ASP	A	337	67.298	61.359	35.285	1.00	28.42	C
ATOM	1638	OD1	ASP	A	337	67.631	61.405	36.483	1.00	31.45	O
ATOM	1639	OD2	ASP	A	337	66.131	61.578	34.897	1.00	29.42	O
ATOM	1640	N	VAL	A	338	68.187	57.912	33.980	1.00	24.02	N
ATOM	1641	CA	VAL	A	338	67.457	56.664	34.161	1.00	23.68	C
ATOM	1642	C	VAL	A	338	68.326	55.622	34.868	1.00	24.05	C
ATOM	1643	O	VAL	A	338	67.842	54.896	35.735	1.00	23.76	O
ATOM	1644	CB	VAL	A	338	66.956	56.110	32.800	1.00	24.17	C
ATOM	1645	CG1	VAL	A	338	66.387	54.704	32.973	1.00	22.42	C
ATOM	1646	CG2	VAL	A	338	65.882	57.046	32.228	1.00	21.26	C
ATOM	1647	N	VAL	A	339	69.607	55.562	34.505	1.00	23.11	N
ATOM	1648	CA	VAL	A	339	70.533	54.614	35.117	1.00	23.44	C
ATOM	1649	C	VAL	A	339	70.680	54.852	36.624	1.00	24.25	C
ATOM	1650	O	VAL	A	339	70.759	53.898	37.397	1.00	25.77	O
ATOM	1651	CB	VAL	A	339	71.930	54.683	34.444	1.00	23.37	C
ATOM	1652	CG1	VAL	A	339	72.970	53.969	35.290	1.00	21.96	C
ATOM	1653	CG2	VAL	A	339	71.866	54.039	33.067	1.00	21.79	C
ATOM	1654	N	ALA	A	340	70.719	56.114	37.043	1.00	23.85	N
ATOM	1655	CA	ALA	A	340	70.844	56.428	38.464	1.00	24.36	C
ATOM	1656	C	ALA	A	340	69.579	55.983	39.200	1.00	24.66	C
ATOM	1657	O	ALA	A	340	69.645	55.467	40.315	1.00	24.46	O
ATOM	1658	CB	ALA	A	340	71.068	57.923	38.661	1.00	22.34	C
ATOM	1659	N	GLU	A	341	68.426	56.179	38.571	1.00	24.16	N
ATOM	1660	CA	GLU	A	341	67.170	55.784	39.188	1.00	25.70	C
ATOM	1661	C	GLU	A	341	67.116	54.261	39.261	1.00	25.09	C
ATOM	1662	O	GLU	A	341	66.681	53.701	40.258	1.00	24.84	O
ATOM	1663	CB	GLU	A	341	65.980	56.309	38.375	1.00	26.08	C
ATOM	1664	CG	GLU	A	341	64.630	56.199	39.082	1.00	27.72	C
ATOM	1665	CD	GLU	A	341	64.541	57.095	40.311	1.00	31.11	C

ATOM	1666	OE1	GLU	A	341	65.068	58.227	40.269	1.00	32.05	O
ATOM	1667	OE2	GLU	A	341	63.929	56.680	41.315	1.00	31.72	O
ATOM	1668	N	ARG	A	342	67.558	53.601	38.195	1.00	25.02	N
ATOM	1669	CA	ARG	A	342	67.567	52.141	38.137	1.00	25.81	C
ATOM	1670	C	ARG	A	342	68.459	51.563	39.241	1.00	25.77	C
ATOM	1671	O	ARG	A	342	68.101	50.572	39.869	1.00	25.65	O
ATOM	1672	CB	ARG	A	342	68.045	51.676	36.752	1.00	24.80	C
ATOM	1673	CG	ARG	A	342	67.994	50.162	36.495	1.00	24.72	C
ATOM	1674	CD	ARG	A	342	69.246	49.441	37.015	1.00	23.36	C
ATOM	1675	NE	ARG	A	342	70.486	49.936	36.413	1.00	22.99	N
ATOM	1676	CZ	ARG	A	342	70.856	49.729	35.149	1.00	23.14	C
ATOM	1677	NH1	ARG	A	342	70.086	49.028	34.325	1.00	23.28	N
ATOM	1678	NH2	ARG	A	342	72.002	50.227	34.701	1.00	22.15	N
ATOM	1679	N	ASN	A	343	69.609	52.189	39.481	1.00	25.74	N
ATOM	1680	CA	ASN	A	343	70.524	51.722	40.519	1.00	26.49	C
ATOM	1681	C	ASN	A	343	69.928	51.972	41.899	1.00	28.14	C
ATOM	1682	O	ASN	A	343	70.119	51.191	42.826	1.00	28.20	O
ATOM	1683	CB	ASN	A	343	71.880	52.418	40.396	1.00	24.99	C
ATOM	1684	CG	ASN	A	343	72.642	51.980	39.163	1.00	26.53	C
ATOM	1685	OD1	ASN	A	343	72.333	50.943	38.572	1.00	25.64	O
ATOM	1686	ND2	ASN	A	343	73.650	52.756	38.774	1.00	24.62	N
ATOM	1687	N	LYS	A	344	69.198	53.071	42.026	1.00	29.38	N
ATOM	1688	CA	LYS	A	344	68.545	53.410	43.276	1.00	30.78	C
ATOM	1689	C	LYS	A	344	67.447	52.373	43.508	1.00	30.83	C
ATOM	1690	O	LYS	A	344	67.280	51.861	44.612	1.00	31.06	O
ATOM	1691	CB	LYS	A	344	67.947	54.810	43.172	1.00	33.74	C
ATOM	1692	CG	LYS	A	344	67.298	55.335	44.437	1.00	38.78	C
ATOM	1693	CD	LYS	A	344	66.906	56.799	44.255	1.00	41.30	C
ATOM	1694	CE	LYS	A	344	66.250	57.364	45.501	1.00	43.10	C
ATOM	1695	NZ	LYS	A	344	65.928	58.810	45.325	1.00	46.21	N
ATOM	1696	N	TYR	A	345	66.715	52.054	42.448	1.00	29.99	N
ATOM	1697	CA	TYR	A	345	65.640	51.076	42.516	1.00	30.40	C
ATOM	1698	C	TYR	A	345	66.174	49.696	42.921	1.00	31.13	C
ATOM	1699	O	TYR	A	345	65.538	48.977	43.693	1.00	31.45	O
ATOM	1700	CB	TYR	A	345	64.950	50.968	41.162	1.00	29.11	C
ATOM	1701	CG	TYR	A	345	63.630	50.231	41.196	1.00	29.15	C
ATOM	1702	CD1	TYR	A	345	62.465	50.880	41.597	1.00	29.67	C
ATOM	1703	CD2	TYR	A	345	63.539	48.896	40.802	1.00	28.37	C
ATOM	1704	CE1	TYR	A	345	61.243	50.226	41.597	1.00	29.42	C
ATOM	1705	CE2	TYR	A	345	62.318	48.230	40.800	1.00	29.73	C
ATOM	1706	CZ	TYR	A	345	61.175	48.905	41.196	1.00	30.08	C
ATOM	1707	OH	TYR	A	345	59.954	48.279	41.163	1.00	31.23	O
ATOM	1708	N	PHE	A	346	67.334	49.328	42.387	1.00	31.61	N
ATOM	1709	CA	PHE	A	346	67.949	48.040	42.705	1.00	32.63	C
ATOM	1710	C	PHE	A	346	68.288	47.958	44.194	1.00	33.80	C
ATOM	1711	O	PHE	A	346	68.060	46.932	44.837	1.00	33.23	O
ATOM	1712	CB	PHE	A	346	69.223	47.836	41.877	1.00	32.13	C
ATOM	1713	CG	PHE	A	346	69.961	46.567	42.204	1.00	33.47	C
ATOM	1714	CD1	PHE	A	346	69.380	45.326	41.969	1.00	33.38	C
ATOM	1715	CD2	PHE	A	346	71.235	46.613	42.763	1.00	35.61	C
ATOM	1716	CE1	PHE	A	346	70.050	44.151	42.284	1.00	33.75	C
ATOM	1717	CE2	PHE	A	346	71.917	45.440	43.084	1.00	36.22	C
ATOM	1718	CZ	PHE	A	346	71.320	44.206	42.842	1.00	35.99	C
ATOM	1719	N	GLU	A	347	68.826	49.045	44.737	1.00	34.63	N
ATOM	1720	CA	GLU	A	347	69.187	49.090	46.148	1.00	37.31	C
ATOM	1721	C	GLU	A	347	67.980	48.990	47.074	1.00	37.23	C
ATOM	1722	O	GLU	A	347	68.068	48.393	48.144	1.00	38.77	O

ATOM	1723	CB	GLU	A	347	69.953	50.377	46.468	1.00	37.91	C
ATOM	1724	CG	GLU	A	347	71.349	50.441	45.877	1.00	43.97	C
ATOM	1725	CD	GLU	A	347	72.215	49.262	46.296	1.00	47.61	C
ATOM	1726	OE1	GLU	A	347	72.231	48.923	47.501	1.00	50.24	O
ATOM	1727	OE2	GLU	A	347	72.889	48.675	45.420	1.00	50.39	O
ATOM	1728	N	GLU	A	348	66.858	49.571	46.664	1.00	36.75	N
ATOM	1729	CA	GLU	A	348	65.652	49.556	47.482	1.00	36.89	C
ATOM	1730	C	GLU	A	348	64.901	48.230	47.444	1.00	36.67	C
ATOM	1731	O	GLU	A	348	64.376	47.780	48.460	1.00	37.48	O
ATOM	1732	CB	GLU	A	348	64.672	50.643	47.022	1.00	37.65	C
ATOM	1733	CG	GLU	A	348	65.295	51.969	46.635	1.00	40.22	C
ATOM	1734	CD	GLU	A	348	64.265	52.960	46.108	1.00	40.32	C
ATOM	1735	OE1	GLU	A	348	63.309	52.526	45.434	1.00	41.11	O
ATOM	1736	OE2	GLU	A	348	64.417	54.174	46.356	1.00	41.33	O
ATOM	1737	N	THR	A	349	64.856	47.610	46.268	1.00	35.60	N
ATOM	1738	CA	THR	A	349	64.096	46.382	46.075	1.00	33.65	C
ATOM	1739	C	THR	A	349	64.859	45.094	45.759	1.00	33.57	C
ATOM	1740	O	THR	A	349	64.282	44.006	45.807	1.00	33.25	O
ATOM	1741	CB	THR	A	349	63.071	46.588	44.950	1.00	33.39	C
ATOM	1742	OG1	THR	A	349	63.763	46.710	43.700	1.00	32.24	O
ATOM	1743	CG2	THR	A	349	62.265	47.863	45.187	1.00	33.01	C
ATOM	1744	N	GLY	A	350	66.138	45.205	45.425	1.00	32.80	N
ATOM	1745	CA	GLY	A	350	66.903	44.018	45.085	1.00	31.46	C
ATOM	1746	C	GLY	A	350	66.608	43.556	43.666	1.00	29.99	C
ATOM	1747	O	GLY	A	350	67.073	42.503	43.232	1.00	30.31	O
ATOM	1748	N	ILE	A	351	65.832	44.346	42.933	1.00	28.63	N
ATOM	1749	CA	ILE	A	351	65.482	44.001	41.557	1.00	27.69	C
ATOM	1750	C	ILE	A	351	66.327	44.807	40.575	1.00	27.05	C
ATOM	1751	O	ILE	A	351	66.315	46.036	40.612	1.00	24.50	O
ATOM	1752	CB	ILE	A	351	64.004	44.315	41.253	1.00	29.37	C
ATOM	1753	CG1	ILE	A	351	63.092	43.640	42.281	1.00	31.00	C
ATOM	1754	CG2	ILE	A	351	63.662	43.862	39.841	1.00	28.85	C
ATOM	1755	CD1	ILE	A	351	61.625	44.051	42.154	1.00	32.57	C
ATOM	1756	N	TYR	A	352	67.060	44.121	39.702	1.00	26.80	N
ATOM	1757	CA	TYR	A	352	67.879	44.811	38.715	1.00	26.62	C
ATOM	1758	C	TYR	A	352	67.142	44.808	37.385	1.00	26.67	C
ATOM	1759	O	TYR	A	352	66.899	43.751	36.804	1.00	26.28	O
ATOM	1760	CB	TYR	A	352	69.240	44.130	38.527	1.00	25.22	C
ATOM	1761	CG	TYR	A	352	70.153	44.886	37.578	1.00	24.08	C
ATOM	1762	CD1	TYR	A	352	70.961	45.931	38.035	1.00	22.64	C
ATOM	1763	CD2	TYR	A	352	70.185	44.580	36.218	1.00	23.85	C
ATOM	1764	CE1	TYR	A	352	71.780	46.647	37.161	1.00	21.59	C
ATOM	1765	CE2	TYR	A	352	70.998	45.294	35.334	1.00	22.91	C
ATOM	1766	CZ	TYR	A	352	71.793	46.321	35.814	1.00	21.43	C
ATOM	1767	OH	TYR	A	352	72.621	47.001	34.951	1.00	22.44	O
ATOM	1768	N	ILE	A	353	66.782	45.992	36.906	1.00	26.51	N
ATOM	1769	CA	ILE	A	353	66.085	46.094	35.635	1.00	26.58	C
ATOM	1770	C	ILE	A	353	67.019	46.605	34.542	1.00	26.72	C
ATOM	1771	O	ILE	A	353	67.517	47.730	34.612	1.00	26.19	O
ATOM	1772	CB	ILE	A	353	64.882	47.042	35.735	1.00	27.79	C
ATOM	1773	CG1	ILE	A	353	63.948	46.566	36.855	1.00	28.55	C
ATOM	1774	CG2	ILE	A	353	64.147	47.086	34.399	1.00	27.23	C
ATOM	1775	CD1	ILE	A	353	62.751	47.446	37.089	1.00	27.39	C
ATOM	1776	N	PRO	A	354	67.290	45.770	33.526	1.00	25.87	N
ATOM	1777	CA	PRO	A	354	68.174	46.189	32.435	1.00	24.49	C
ATOM	1778	C	PRO	A	354	67.530	47.347	31.680	1.00	24.47	C
ATOM	1779	O	PRO	A	354	66.312	47.368	31.503	1.00	24.18	O

TABLE 4

ATOM	1780	CB	PRO A 354	68.273	44.935	31.568	1.00	23.91	C
ATOM	1781	CG	PRO A 354	68.077	43.813	32.561	1.00	24.60	C
ATOM	1782	CD	PRO A 354	66.947	44.341	33.409	1.00	25.26	C
ATOM	1783	N	VAL A 355	68.333	48.317	31.250	1.00	23.40	N
ATOM	1784	CA	VAL A 355	67.783	49.433	30.495	1.00	22.64	C
ATOM	1785	C	VAL A 355	68.418	49.464	29.119	1.00	22.19	C
ATOM	1786	O	VAL A 355	69.576	49.090	28.944	1.00	21.72	O
ATOM	1787	CB	VAL A 355	67.989	50.805	31.211	1.00	23.23	C
ATOM	1788	CG1	VAL A 355	67.314	50.773	32.582	1.00	20.89	C
ATOM	1789	CG2	VAL A 355	69.478	51.144	31.325	1.00	20.18	C
ATOM	1790	N	CYS A 356	67.640	49.905	28.141	1.00	21.94	N
ATOM	1791	CA	CYS A 356	68.100	49.965	26.769	1.00	22.63	C
ATOM	1792	C	CYS A 356	68.172	51.393	26.251	1.00	23.07	C
ATOM	1793	O	CYS A 356	67.192	52.131	26.330	1.00	24.45	O
ATOM	1794	CB	CYS A 356	67.148	49.152	25.887	1.00	22.81	C
ATOM	1795	SG	CYS A 356	67.367	49.360	24.113	1.00	23.52	S
ATOM	1796	N	SER A 357	69.332	51.784	25.732	1.00	23.41	N
ATOM	1797	CA	SER A 357	69.480	53.118	25.158	1.00	23.70	C
ATOM	1798	C	SER A 357	69.024	52.967	23.712	1.00	23.48	C
ATOM	1799	O	SER A 357	69.703	52.339	22.902	1.00	23.03	O
ATOM	1800	CB	SER A 357	70.933	53.587	25.186	1.00	23.53	C
ATOM	1801	OG	SER A 357	71.039	54.865	24.579	1.00	23.13	O
ATOM	1802	N	ASP A 358	67.871	53.550	23.406	1.00	23.76	N
ATOM	1803	CA	ASP A 358	67.269	53.465	22.080	1.00	24.67	C
ATOM	1804	C	ASP A 358	67.363	54.754	21.268	1.00	25.27	C
ATOM	1805	O	ASP A 358	66.749	55.762	21.608	1.00	24.49	O
ATOM	1806	CB	ASP A 358	65.799	53.040	22.238	1.00	24.63	C
ATOM	1807	CG	ASP A 358	65.060	52.947	20.922	1.00	24.23	C
ATOM	1808	OD1	ASP A 358	65.706	52.780	19.869	1.00	24.31	O
ATOM	1809	OD2	ASP A 358	63.818	53.024	20.952	1.00	23.07	O
ATOM	1810	N	GLY A 359	68.144	54.711	20.192	1.00	26.85	N
ATOM	1811	CA	GLY A 359	68.284	55.870	19.332	1.00	28.13	C
ATOM	1812	C	GLY A 359	69.370	56.852	19.717	1.00	30.06	C
ATOM	1813	O	GLY A 359	69.890	56.829	20.832	1.00	30.69	O
ATOM	1814	N	GLY A 360	69.722	57.717	18.775	1.00	32.24	N
ATOM	1815	CA	GLY A 360	70.740	58.714	19.037	1.00	34.39	C
ATOM	1816	C	GLY A 360	72.159	58.243	18.804	1.00	34.76	C
ATOM	1817	O	GLY A 360	73.099	58.981	19.085	1.00	37.37	O
ATOM	1818	N	ILE A 361	72.328	57.019	18.315	1.00	36.00	N
ATOM	1819	CA	ILE A 361	73.664	56.496	18.046	1.00	37.27	C
ATOM	1820	C	ILE A 361	74.052	56.893	16.627	1.00	39.44	C
ATOM	1821	O	ILE A 361	73.479	56.392	15.657	1.00	39.25	O
ATOM	1822	CB	ILE A 361	73.715	54.949	18.144	1.00	36.74	C
ATOM	1823	CG1	ILE A 361	73.421	54.490	19.580	1.00	36.41	C
ATOM	1824	CG2	ILE A 361	75.081	54.442	17.679	1.00	35.82	C
ATOM	1825	CD1	ILE A 361	74.512	54.788	20.589	1.00	33.92	C
ATOM	1826	N	VAL A 362	75.024	57.793	16.508	1.00	41.13	N
ATOM	1827	CA	VAL A 362	75.479	58.248	15.201	1.00	42.28	C
ATOM	1828	C	VAL A 362	76.807	57.608	14.801	1.00	42.57	C
ATOM	1829	O	VAL A 362	76.993	57.249	13.640	1.00	44.09	O
ATOM	1830	CB	VAL A 362	75.630	59.781	15.167	1.00	43.37	C
ATOM	1831	CG1	VAL A 362	76.025	60.236	13.762	1.00	44.64	C
ATOM	1832	CG2	VAL A 362	74.324	60.438	15.592	1.00	43.73	C
ATOM	1833	N	TYR A 363	77.722	57.459	15.760	1.00	41.34	N
ATOM	1834	CA	TYR A 363	79.032	56.857	15.495	1.00	39.51	C
ATOM	1835	C	TYR A 363	79.287	55.654	16.396	1.00	37.48	C
ATOM	1836	O	TYR A 363	78.654	55.512	17.440	1.00	37.25	O

TABLE 4

ATOM	1837	CB	TYR	A	363	80.136	57.887	15.718	1.00	41.87	C
ATOM	1838	CG	TYR	A	363	79.974	59.140	14.896	1.00	45.48	C
ATOM	1839	CD1	TYR	A	363	80.011	59.093	13.504	1.00	47.49	C
ATOM	1840	CD2	TYR	A	363	79.779	60.374	15.509	1.00	46.57	C
ATOM	1841	CE1	TYR	A	363	79.858	60.246	12.742	1.00	49.35	C
ATOM	1842	CE2	TYR	A	363	79.625	61.531	14.759	1.00	48.79	C
ATOM	1843	CZ	TYR	A	363	79.666	61.461	13.377	1.00	49.83	C
ATOM	1844	OH	TYR	A	363	79.519	62.610	12.629	1.00	52.64	O
ATOM	1845	N	ASP	A	364	80.223	54.793	16.007	1.00	35.17	N
ATOM	1846	CA	ASP	A	364	80.523	53.619	16.821	1.00	34.10	C
ATOM	1847	C	ASP	A	364	80.846	53.973	18.271	1.00	32.20	C
ATOM	1848	O	ASP	A	364	80.387	53.298	19.191	1.00	33.00	O
ATOM	1849	CB	ASP	A	364	81.696	52.815	16.240	1.00	36.21	C
ATOM	1850	CG	ASP	A	364	81.321	52.031	14.991	1.00	36.90	C
ATOM	1851	OD1	ASP	A	364	80.170	51.566	14.885	1.00	36.58	O
ATOM	1852	OD2	ASP	A	364	82.194	51.860	14.118	1.00	38.57	O
ATOM	1853	N	TYR	A	365	81.621	55.033	18.485	1.00	30.02	N
ATOM	1854	CA	TYR	A	365	81.994	55.401	19.848	1.00	28.95	C
ATOM	1855	C	TYR	A	365	80.802	55.809	20.709	1.00	27.94	C
ATOM	1856	O	TYR	A	365	80.899	55.825	21.931	1.00	26.36	O
ATOM	1857	CB	TYR	A	365	83.081	56.489	19.843	1.00	28.15	C
ATOM	1858	CG	TYR	A	365	82.607	57.921	19.696	1.00	29.09	C
ATOM	1859	CD1	TYR	A	365	82.405	58.729	20.816	1.00	28.03	C
ATOM	1860	CD2	TYR	A	365	82.421	58.487	18.437	1.00	29.60	C
ATOM	1861	CE1	TYR	A	365	82.039	60.073	20.681	1.00	29.32	C
ATOM	1862	CE2	TYR	A	365	82.055	59.830	18.291	1.00	30.03	C
ATOM	1863	CZ	TYR	A	365	81.868	60.613	19.414	1.00	30.20	C
ATOM	1864	OH	TYR	A	365	81.519	61.936	19.259	1.00	32.66	O
ATOM	1865	N	HIS	A	366	79.674	56.126	20.074	1.00	28.10	N
ATOM	1866	CA	HIS	A	366	78.478	56.477	20.829	1.00	27.17	C
ATOM	1867	C	HIS	A	366	77.995	55.216	21.548	1.00	25.93	C
ATOM	1868	O	HIS	A	366	77.380	55.301	22.609	1.00	24.73	O
ATOM	1869	CB	HIS	A	366	77.371	57.003	19.909	1.00	28.22	C
ATOM	1870	CG	HIS	A	366	77.616	58.387	19.394	1.00	29.65	C
ATOM	1871	ND1	HIS	A	366	78.642	59.184	19.856	1.00	31.11	N
ATOM	1872	CD2	HIS	A	366	76.947	59.129	18.481	1.00	30.20	C
ATOM	1873	CE1	HIS	A	366	78.593	60.357	19.252	1.00	29.57	C
ATOM	1874	NE2	HIS	A	366	77.574	60.350	18.412	1.00	31.07	N
ATOM	1875	N	MET	A	367	78.275	54.051	20.960	1.00	24.23	N
ATOM	1876	CA	MET	A	367	77.892	52.773	21.569	1.00	24.28	C
ATOM	1877	C	MET	A	367	78.634	52.627	22.892	1.00	22.96	C
ATOM	1878	O	MET	A	367	78.036	52.342	23.924	1.00	23.44	O
ATOM	1879	CB	MET	A	367	78.273	51.595	20.666	1.00	24.50	C
ATOM	1880	CG	MET	A	367	77.537	51.530	19.332	1.00	26.42	C
ATOM	1881	SD	MET	A	367	78.087	50.102	18.355	1.00	29.45	S
ATOM	1882	CE	MET	A	367	77.053	50.267	16.894	1.00	28.05	C
ATOM	1883	N	THR	A	368	79.947	52.827	22.853	1.00	23.22	N
ATOM	1884	CA	THR	A	368	80.764	52.719	24.058	1.00	23.72	C
ATOM	1885	C	THR	A	368	80.266	53.711	25.110	1.00	22.92	C
ATOM	1886	O	THR	A	368	80.180	53.379	26.290	1.00	23.78	O
ATOM	1887	CB	THR	A	368	82.249	53.005	23.748	1.00	24.12	C
ATOM	1888	OG1	THR	A	368	82.625	52.305	22.554	1.00	24.48	O
ATOM	1889	CG2	THR	A	368	83.138	52.537	24.902	1.00	23.20	C
ATOM	1890	N	LEU	A	369	79.939	54.929	24.680	1.00	22.01	N
ATOM	1891	CA	LEU	A	369	79.435	55.947	25.602	1.00	22.78	C
ATOM	1892	C	LEU	A	369	78.125	55.525	26.253	1.00	22.41	C
ATOM	1893	O	LEU	A	369	77.958	55.659	27.464	1.00	23.15	O

TABLE 4

ATOM	1894	CB	LEU A 369	79.217	57.280	24.882	1.00	21.96	C
ATOM	1895	CG	LEU A 369	80.456	58.127	24.604	1.00	23.46	C
ATOM	1896	CD1	LEU A 369	80.050	59.369	23.807	1.00	22.62	C
ATOM	1897	CD2	LEU A 369	81.114	58.520	25.929	1.00	21.25	C
ATOM	1898	N	ALA A 370	77.197	55.016	25.445	1.00	21.89	N
ATOM	1899	CA	ALA A 370	75.898	54.592	25.956	1.00	22.53	C
ATOM	1900	C	ALA A 370	76.069	53.503	27.013	1.00	21.32	C
ATOM	1901	O	ALA A 370	75.411	53.524	28.047	1.00	22.46	O
ATOM	1902	CB	ALA A 370	75.018	54.087	24.805	1.00	20.75	C
ATOM	1903	N	LEU A 371	76.959	52.555	26.751	1.00	21.38	N
ATOM	1904	CA	LEU A 371	77.205	51.470	27.693	1.00	21.60	C
ATOM	1905	C	LEU A 371	77.899	52.010	28.950	1.00	22.18	C
ATOM	1906	O	LEU A 371	77.494	51.700	30.063	1.00	22.86	O
ATOM	1907	CB	LEU A 371	78.062	50.384	27.029	1.00	20.20	C
ATOM	1908	CG	LEU A 371	77.444	49.692	25.806	1.00	21.57	C
ATOM	1909	CD1	LEU A 371	78.482	48.784	25.147	1.00	23.83	C
ATOM	1910	CD2	LEU A 371	76.220	48.884	26.228	1.00	21.62	C
ATOM	1911	N	ALA A 372	78.932	52.835	28.763	1.00	22.30	N
ATOM	1912	CA	ALA A 372	79.675	53.407	29.883	1.00	22.28	C
ATOM	1913	C	ALA A 372	78.768	54.196	30.814	1.00	23.49	C
ATOM	1914	O	ALA A 372	78.979	54.225	32.027	1.00	22.49	O
ATOM	1915	CB	ALA A 372	80.794	54.305	29.369	1.00	21.55	C
ATOM	1916	N	MET A 373	77.763	54.848	30.242	1.00	23.46	N
ATOM	1917	CA	MET A 373	76.837	55.631	31.043	1.00	23.37	C
ATOM	1918	C	MET A 373	75.850	54.762	31.830	1.00	22.64	C
ATOM	1919	O	MET A 373	75.111	55.269	32.662	1.00	22.93	O
ATOM	1920	CB	MET A 373	76.100	56.639	30.150	1.00	23.08	C
ATOM	1921	CG	MET A 373	77.007	57.763	29.640	1.00	23.17	C
ATOM	1922	SD	MET A 373	76.206	58.901	28.474	1.00	23.90	S
ATOM	1923	CE	MET A 373	77.545	60.031	28.102	1.00	22.19	C
ATOM	1924	N	GLY A 374	75.842	53.457	31.577	1.00	23.01	N
ATOM	1925	CA	GLY A 374	74.952	52.579	32.322	1.00	22.40	C
ATOM	1926	C	GLY A 374	73.945	51.751	31.540	1.00	23.47	C
ATOM	1927	O	GLY A 374	73.316	50.853	32.106	1.00	24.05	O
ATOM	1928	N	ALA A 375	73.764	52.041	30.257	1.00	22.06	N
ATOM	1929	CA	ALA A 375	72.826	51.264	29.460	1.00	23.47	C
ATOM	1930	C	ALA A 375	73.365	49.840	29.331	1.00	23.69	C
ATOM	1931	O	ALA A 375	74.549	49.641	29.065	1.00	25.05	O
ATOM	1932	CB	ALA A 375	72.655	51.887	28.082	1.00	20.67	C
ATOM	1933	N	ASP A 376	72.497	48.854	29.528	1.00	24.20	N
ATOM	1934	CA	ASP A 376	72.895	47.453	29.431	1.00	24.16	C
ATOM	1935	C	ASP A 376	73.021	47.053	27.968	1.00	23.81	C
ATOM	1936	O	ASP A 376	73.937	46.324	27.596	1.00	23.82	O
ATOM	1937	CB	ASP A 376	71.878	46.579	30.159	1.00	24.02	C
ATOM	1938	CG	ASP A 376	71.763	46.939	31.632	1.00	24.67	C
ATOM	1939	OD1	ASP A 376	72.561	46.418	32.444	1.00	24.99	O
ATOM	1940	OD2	ASP A 376	70.889	47.764	31.977	1.00	24.71	O
ATOM	1941	N	PHE A 377	72.094	47.521	27.139	1.00	23.81	N
ATOM	1942	CA	PHE A 377	72.164	47.245	25.712	1.00	23.63	C
ATOM	1943	C	PHE A 377	71.667	48.440	24.905	1.00	23.27	C
ATOM	1944	O	PHE A 377	71.132	49.398	25.462	1.00	22.71	O
ATOM	1945	CB	PHE A 377	71.427	45.942	25.320	1.00	22.50	C
ATOM	1946	CG	PHE A 377	70.013	45.838	25.817	1.00	23.64	C
ATOM	1947	CD1	PHE A 377	69.748	45.464	27.132	1.00	25.15	C
ATOM	1948	CD2	PHE A 377	68.941	46.055	24.953	1.00	22.89	C
ATOM	1949	CE1	PHE A 377	68.428	45.300	27.579	1.00	25.01	C
ATOM	1950	CE2	PHE A 377	67.626	45.895	25.387	1.00	23.60	C



TABLE 4

ATOM	1951	CZ	PHE A 377	67.369	45.516	26.702	1.00	24.96	C
ATOM	1952	N	ILE A 378	71.857	48.376	23.592	1.00	22.99	N
ATOM	1953	CA	ILE A 378	71.512	49.470	22.698	1.00	23.32	C
ATOM	1954	C	ILE A 378	70.573	49.043	21.573	1.00	24.13	C
ATOM	1955	O	ILE A 378	70.760	47.983	20.978	1.00	24.04	O
ATOM	1956	CB	ILE A 378	72.815	50.030	22.061	1.00	24.07	C
ATOM	1957	CG1	ILE A 378	73.807	50.406	23.163	1.00	25.55	C
ATOM	1958	CG2	ILE A 378	72.521	51.232	21.176	1.00	23.97.	C
ATOM	1959	CD1	ILE A 378	75.242	50.486	22.665	1.00	25.45	C
ATOM	1960	N	MET A 379	69.565	49.866	21.285	1.00	23.06	N
ATOM	1961	CA	MET A 379	68.643	49.566	20.195	1.00	23.94	C
ATOM	1962	C	MET A 379	68.968	50.516	19.045	1.00	24.07	C
ATOM	1963	O	MET A 379	69.061	51.725	19.237	1.00	23.67	O
ATOM	1964	CB	MET A 379	67.179	49.746	20.621	1.00	23.89	C
ATOM	1965	CG	MET A 379	66.206	49.546	19.461	1.00	23.47	C
ATOM	1966	SD	MET A 379	64.466	49.424	19.913	1.00	23.78	S
ATOM	1967	CE	MET A 379	64.375	47.682	20.458	1.00	23.21	C
ATOM	1968	N	LEU A 380	69.136	49.961	17.851	1.00	24.45	N
ATOM	1969	CA	LEU A 380	69.476	50.758	16.682	1.00	25.64	C
ATOM	1970	C	LEU A 380	68.561	50.484	15.502	1.00	25.46	C
ATOM	1971	O	LEU A 380	68.162	49.346	15.265	1.00	24.86	O
ATOM	1972	CB	LEU A 380	70.922	50.477	16.259	1.00	26.84	C
ATOM	1973	CG	LEU A 380	72.033	50.818	17.255	1.00	28.40	C
ATOM	1974	CD1	LEU A 380	73.394	50.462	16.689	1.00	28.92	C
ATOM	1975	CD2	LEU A 380	71.977	52.299	17.546	1.00	31.59	C
ATOM	1976	N	GLY A 381	68.238	51.539	14.764	1.00	26.35	N
ATOM	1977	CA	GLY A 381	67.398	51.397	13.587	1.00	27.38	C
ATOM	1978	C	GLY A 381	68.230	51.618	12.335	1.00	27.51	C
ATOM	1979	O	GLY A 381	68.535	50.679	11.604	1.00	27.02	O
ATOM	1980	N	ARG A 382	68.611	52.870	12.108	1.00	29.52	N
ATOM	1981	CA	ARG A 382	69.412	53.264	10.947	1.00	32.19	C
ATOM	1982	C	ARG A 382	70.626	52.353	10.722	1.00	30.92	C
ATOM	1983	O	ARG A 382	70.878	51.899	9.608	1.00	30.21	O
ATOM	1984	CB	ARG A 382	69.895	54.707	11.125	1.00	35.86	C
ATOM	1985	CG	ARG A 382	69.994	55.497	9.834	1.00	42.94	C
ATOM	1986	CD	ARG A 382	70.799	56.793	9.990	1.00	48.04	C
ATOM	1987	NE	ARG A 382	72.237	56.531	10.060	1.00	52.92	N
ATOM	1988	CZ	ARG A 382	72.883	56.136	11.156	1.00	55.81	C
ATOM	1989	NH1	ARG A 382	72.228	55.961	12.296	1.00	57.30	N
ATOM	1990	NH2	ARG A 382	74.187	55.896	11.106	1.00	56.34	N
ATOM	1991	N	TYR A 383	71.376	52.105	11.791	1.00	29.98	N
ATOM	1992	CA	TYR A 383	72.569	51.261	11.748	1.00	28.39	C
ATOM	1993	C	TYR A 383	72.324	49.926	11.034	1.00	28.21	C
ATOM	1994	O	TYR A 383	73.084	49.543	10.143	1.00	27.77	O
ATOM	1995	CB	TYR A 383	73.059	51.000	13.179	1.00	26.48	C
ATOM	1996	CG	TYR A 383	74.301	50.137	13.276	1.00	25.37	C
ATOM	1997	CD1	TYR A 383	75.578	50.703	13.240	1.00	24.67	C
ATOM	1998	CD2	TYR A 383	74.196	48.752	13.397	1.00	24.26	C
ATOM	1999	CE1	TYR A 383	76.716	49.910	13.322	1.00	24.73	C
ATOM	2000	CE2	TYR A 383	75.320	47.951	13.479	1.00	23.84	C
ATOM	2001	CZ	TYR A 383	76.578	48.530	13.440	1.00	25.89	C
ATOM	2002	OH	TYR A 383	77.689	47.722	13.511	1.00	25.39	O
ATOM	2003	N	PHE A 384	71.263	49.228	11.428	1.00	27.07	N
ATOM	2004	CA	PHE A 384	70.922	47.931	10.843	1.00	28.18	C
ATOM	2005	C	PHE A 384	70.200	48.007	9.493	1.00	28.50	C
ATOM	2006	O	PHE A 384	70.278	47.076	8.696	1.00	29.39	O
ATOM	2007	CB	PHE A 384	70.068	47.122	11.827	1.00	25.94	C

TABLE 4

ATOM	2008	CG	PHE A 384	70.832	46.611	13.025	1.00	26.50	C
ATOM	2009	CD1	PHE A 384	71.790	45.610	12.882	1.00	25.77	C
ATOM	2010	CD2	PHE A 384	70.595	47.133	14.295	1.00	25.04	C
ATOM	2011	CE1	PHE A 384	72.502	45.135	13.983	1.00	25.85	C
ATOM	2012	CE2	PHE A 384	71.300	46.666	15.402	1.00	26.26	C
ATOM	2013	CZ	PHE A 384	72.258	45.663	15.246	1.00	25.10	C
ATOM	2014	N	ALA A 385	69.493	49.105	9.244	1.00	29.51	N
ATOM	2015	CA	ALA A 385	68.758	49.281	7.996	1.00	29.99	C
ATOM	2016	C	ALA A 385	69.686	49.249	6.780	1.00	31.15	C
ATOM	2017	O	ALA A 385	69.275	48.868	5.685	1.00	31.07	O
ATOM	2018	CB	ALA A 385	67.993	50.600	8.033	1.00	29.53	C
ATOM	2019	N	ARG A 386	70.939	49.647	6.989	1.00	32.12	N
ATOM	2020	CA	ARG A 386	71.949	49.686	5.936	1.00	32.14	C
ATOM	2021	C	ARG A 386	72.391	48.308	5.453	1.00	32.91	C
ATOM	2022	O	ARG A 386	72.983	48.180	4.380	1.00	33.24	O
ATOM	2023	CB	ARG A 386	73.204	50.405	6.434	1.00	32.61	C
ATOM	2024	CG	ARG A 386	73.039	51.825	6.908	1.00	33.83	C
ATOM	2025	CD	ARG A 386	74.356	52.269	7.538	1.00	36.13	C
ATOM	2026	NE	ARG A 386	74.740	51.371	8.628	1.00	36.98	N
ATOM	2027	CZ	ARG A 386	75.990	51.156	9.027	1.00	37.29	C
ATOM	2028	NH1	ARG A 386	77.004	51.772	8.429	1.00	36.98	N
ATOM	2029	NH2	ARG A 386	76.227	50.318	10.027	1.00	36.19	N
ATOM	2030	N	PHE A 387	72.126	47.279	6.248	1.00	33.19	N
ATOM	2031	CA	PHE A 387	72.565	45.941	5.890	1.00	33.56	C
ATOM	2032	C	PHE A 387	71.710	45.194	4.872	1.00	35.13	C
ATOM	2033	O	PHE A 387	70.511	45.448	4.711	1.00	34.37	O
ATOM	2034	CB	PHE A 387	72.725	45.085	7.155	1.00	32.86	C
ATOM	2035	CG	PHE A 387	73.621	45.701	8.200	1.00	32.36	C
ATOM	2036	CD1	PHE A 387	74.756	46.417	7.832	1.00	31.61	C
ATOM	2037	CD2	PHE A 387	73.331	45.563	9.553	1.00	31.75	C
ATOM	2038	CE1	PHE A 387	75.586	46.991	8.797	1.00	32.70	C
ATOM	2039	CE2	PHE A 387	74.156	46.132	10.529	1.00	31.49	C
ATOM	2040	CZ	PHE A 387	75.284	46.848	10.151	1.00	30.49	C
ATOM	2041	N	GLU A 388	72.364	44.265	4.186	1.00	35.81	N
ATOM	2042	CA	GLU A 388	71.731	43.428	3.181	1.00	36.15	C
ATOM	2043	C	GLU A 388	70.509	42.735	3.770	1.00	34.62	C
ATOM	2044	O	GLU A 388	69.494	42.577	3.098	1.00	33.35	O
ATOM	2045	CB	GLU A 388	72.730	42.374	2.689	1.00	38.38	C
ATOM	2046	CG	GLU A 388	72.130	41.319	1.771	1.00	42.94	C
ATOM	2047	CD	GLU A 388	71.780	41.870	0.404	1.00	45.98	C
ATOM	2048	OE1	GLU A 388	70.997	41.216	-0.324	1.00	48.50	O
ATOM	2049	OE2	GLU A 388	72.297	42.954	0.054	1.00	47.51	O
ATOM	2050	N	GLU A 389	70.609	42.343	5.038	1.00	33.73	N
ATOM	2051	CA	GLU A 389	69.526	41.639	5.706	1.00	33.32	C
ATOM	2052	C	GLU A 389	68.295	42.448	6.115	1.00	33.33	C
ATOM	2053	O	GLU A 389	67.313	41.864	6.563	1.00	33.97	O
ATOM	2054	CB	GLU A 389	70.067	40.883	6.924	1.00	33.42	C
ATOM	2055	CG	GLU A 389	71.099	39.827	6.575	1.00	33.24	C
ATOM	2056	CD	GLU A 389	72.525	40.343	6.656	1.00	34.22	C
ATOM	2057	OE1	GLU A 389	72.736	41.563	6.511	1.00	33.67	O
ATOM	2058	OE2	GLU A 389	73.441	39.519	6.854	1.00	34.50	O
ATOM	2059	N	SER A 390	68.328	43.772	5.986	1.00	33.75	N
ATOM	2060	CA	SER A 390	67.145	44.558	6.341	1.00	35.12	C
ATOM	2061	C	SER A 390	66.106	44.264	5.252	1.00	36.23	C
ATOM	2062	O	SER A 390	66.462	44.028	4.097	1.00	35.59	O
ATOM	2063	CB	SER A 390	67.456	46.055	6.397	1.00	33.40	C
ATOM	2064	OG	SER A 390	67.716	46.575	5.112	1.00	35.26	O

TABLE 4

ATOM	2065	N	PRO	A	391	64.811	44.290	5.608	1.00	37.69	N
ATOM	2066	CA	PRO	A	391	63.704	44.012	4.686	1.00	39.43	C
ATOM	2067	C	PRO	A	391	63.332	45.059	3.635	1.00	40.72	C
ATOM	2068	O	PRO	A	391	62.291	44.938	2.991	1.00	41.37	O
ATOM	2069	CB	PRO	A	391	62.548	43.729	5.639	1.00	39.02	C
ATOM	2070	CG	PRO	A	391	62.797	44.733	6.725	1.00	38.46	C
ATOM	2071	CD	PRO	A	391	64.300	44.637	6.949	1.00	36.88	C
ATOM	2072	N	THR	A	392	64.167	46.071	3.443	1.00	41.57	N
ATOM	2073	CA	THR	A	392	63.844	47.103	2.469	1.00	42.35	C
ATOM	2074	C	THR	A	392	64.520	46.929	1.114	1.00	44.91	C
ATOM	2075	O	THR	A	392	65.399	46.084	0.938	1.00	45.02	O
ATOM	2076	CB	THR	A	392	64.178	48.502	3.011	1.00	41.05	C
ATOM	2077	OG1	THR	A	392	65.579	48.587	3.293	1.00	39.97	O
ATOM	2078	CG2	THR	A	392	63.383	48.778	4.281	1.00	39.92	C
ATOM	2079	N	ARG	A	393	64.094	47.747	0.159	1.00	47.45	N
ATOM	2080	CA	ARG	A	393	64.623	47.703	-1.195	1.00	50.03	C
ATOM	2081	C	ARG	A	393	65.990	48.355	-1.317	1.00	50.45	C
ATOM	2082	O	ARG	A	393	66.243	49.419	-0.751	1.00	50.27	O
ATOM	2083	CB	ARG	A	393	63.640	48.380	-2.163	1.00	51.81	C
ATOM	2084	CG	ARG	A	393	62.377	47.565	-2.431	1.00	54.92	C
ATOM	2085	CD	ARG	A	393	61.284	48.366	-3.146	1.00	57.32	C
ATOM	2086	NE	ARG	A	393	61.775	49.068	-4.328	1.00	59.58	N
ATOM	2087	CZ	ARG	A	393	62.024	50.375	-4.370	1.00	61.26	C
ATOM	2088	NH1	ARG	A	393	61.823	51.125	-3.295	1.00	61.47	N
ATOM	2089	NH2	ARG	A	393	62.481	50.934	-5.484	1.00	62.64	N
ATOM	2090	N	LYS	A	394	66.872	47.690	-2.053	1.00	50.90	N
ATOM	2091	CA	LYS	A	394	68.213	48.191	-2.299	1.00	51.87	C
ATOM	2092	C	LYS	A	394	68.046	49.050	-3.545	1.00	53.29	C
ATOM	2093	O	LYS	A	394	67.637	48.551	-4.590	1.00	53.60	O
ATOM	2094	CB	LYS	A	394	69.158	47.023	-2.579	1.00	51.11	C
ATOM	2095	CG	LYS	A	394	70.618	47.333	-2.352	1.00	50.68	C
ATOM	2096	CD	LYS	A	394	71.508	46.184	-2.795	1.00	49.41	C
ATOM	2097	CE	LYS	A	394	71.231	44.910	-2.025	1.00	48.96	C
ATOM	2098	NZ	LYS	A	394	72.139	43.816	-2.476	1.00	47.88	N
ATOM	2099	N	VAL	A	395	68.343	50.340	-3.435	1.00	55.26	N
ATOM	2100	CA	VAL	A	395	68.183	51.253	-4.562	1.00	57.43	C
ATOM	2101	C	VAL	A	395	69.475	51.939	-4.979	1.00	58.81	C
ATOM	2102	O	VAL	A	395	70.207	52.463	-4.145	1.00	59.36	O
ATOM	2103	CB	VAL	A	395	67.141	52.344	-4.238	1.00	57.67	C
ATOM	2104	CG1	VAL	A	395	67.047	53.339	-5.388	1.00	58.68	C
ATOM	2105	CG2	VAL	A	395	65.789	51.703	-3.974	1.00	57.82	C
ATOM	2106	N	THR	A	396	69.740	51.946	-6.281	1.00	60.52	N
ATOM	2107	CA	THR	A	396	70.942	52.577	-6.813	1.00	62.17	C
ATOM	2108	C	THR	A	396	70.648	53.995	-7.284	1.00	63.08	C
ATOM	2109	O	THR	A	396	69.919	54.197	-8.255	1.00	63.34	O
ATOM	2110	CB	THR	A	396	71.514	51.781	-7.998	1.00	62.45	C
ATOM	2111	OG1	THR	A	396	71.837	50.454	-7.569	1.00	63.27	O
ATOM	2112	CG2	THR	A	396	72.772	52.452	-8.529	1.00	63.24	C
ATOM	2113	N	ILE	A	397	71.222	54.970	-6.586	1.00	64.02	N
ATOM	2114	CA	ILE	A	397	71.035	56.376	-6.918	1.00	65.04	C
ATOM	2115	C	ILE	A	397	72.365	56.980	-7.362	1.00	65.43	C
ATOM	2116	O	ILE	A	397	73.287	57.134	-6.559	1.00	65.88	O
ATOM	2117	CB	ILE	A	397	70.509	57.168	-5.701	1.00	65.43	C
ATOM	2118	CG1	ILE	A	397	69.229	56.516	-5.171	1.00	65.85	C
ATOM	2119	CG2	ILE	A	397	70.230	58.608	-6.099	1.00	65.50	C
ATOM	2120	CD1	ILE	A	397	68.688	57.167	-3.914	1.00	66.46	C
ATOM	2121	N	ASN	A	398	72.450	57.319	-8.644	1.00	65.44	N

ATOM	2122	CA	ASN	A	398	73.652	57.900	-9.238	1.00	65.13	C
ATOM	2123	C	ASN	A	398	74.959	57.251	-8.770	1.00	63.59	C
ATOM	2124	O	ASN	A	398	75.819	57.911	-8.186	1.00	63.13	O
ATOM	2125	CB	ASN	A	398	73.703	59.417	-8.988	1.00	67.26	C
ATOM	2126	CG	ASN	A	398	73.838	59.773	-7.515	1.00	69.20	C
ATOM	2127	OD1	ASN	A	398	72.906	59.598	-6.730	1.00	70.21	O
ATOM	2128	ND2	ASN	A	398	75.009	60.278	-7.135	1.00	69.87	N
ATOM	2129	N	GLY	A	399	75.097	55.954	-9.031	1.00	61.70	N
ATOM	2130	CA	GLY	A	399	76.306	55.242	-8.653	1.00	59.47	C
ATOM	2131	C	GLY	A	399	76.406	54.789	-7.207	1.00	57.89	C
ATOM	2132	O	GLY	A	399	77.324	54.047	-6.850	1.00	57.93	O
ATOM	2133	N	SER	A	400	75.477	55.232	-6.368	1.00	55.71	N
ATOM	2134	CA	SER	A	400	75.495	54.850	-4.960	1.00	52.89	C
ATOM	2135	C	SER	A	400	74.343	53.929	-4.604	1.00	50.55	C
ATOM	2136	O	SER	A	400	73.182	54.249	-4.841	1.00	50.80	O
ATOM	2137	CB	SER	A	400	75.445	56.090	-4.067	1.00	52.32	C
ATOM	2138	OG	SER	A	400	76.657	56.816	-4.147	1.00	53.54	O
ATOM	2139	N	VAL	A	401	74.672	52.778	-4.033	1.00	48.12	N
ATOM	2140	CA	VAL	A	401	73.655	51.824	-3.629	1.00	46.03	C
ATOM	2141	C	VAL	A	401	73.166	52.225	-2.237	1.00	45.54	C
ATOM	2142	O	VAL	A	401	73.959	52.368	-1.302	1.00	44.42	O
ATOM	2143	CB	VAL	A	401	74.224	50.397	-3.605	1.00	45.67	C
ATOM	2144	CG1	VAL	A	401	73.149	49.412	-3.178	1.00	44.59	C
ATOM	2145	CG2	VAL	A	401	74.768	50.041	-4.985	1.00	44.66	C
ATOM	2146	N	MET	A	402	71.856	52.418	-2.118	1.00	44.66	N
ATOM	2147	CA	MET	A	402	71.236	52.829	-0.863	1.00	43.40	C
ATOM	2148	C	MET	A	402	70.154	51.846	-0.434	1.00	42.35	C
ATOM	2149	O	MET	A	402	69.786	50.933	-1.175	1.00	41.19	O
ATOM	2150	CB	MET	A	402	70.580	54.208	-1.020	1.00	45.15	C
ATOM	2151	CG	MET	A	402	71.414	55.261	-1.728	1.00	45.44	C
ATOM	2152	SD	MET	A	402	72.814	55.813	-0.761	1.00	50.48	S
ATOM	2153	CE	MET	A	402	72.042	57.060	0.274	1.00	47.04	C
ATOM	2154	N	LYS	A	403	69.646	52.045	0.776	1.00	40.23	N
ATOM	2155	CA	LYS	A	403	68.575	51.217	1.297	1.00	38.93	C
ATOM	2156	C	LYS	A	403	67.506	52.157	1.827	1.00	38.85	C
ATOM	2157	O	LYS	A	403	67.805	53.246	2.325	1.00	37.82	O
ATOM	2158	CB	LYS	A	403	69.071	50.295	2.414	1.00	38.52	C
ATOM	2159	CG	LYS	A	403	70.049	49.234	1.944	1.00	38.14	C
ATOM	2160	CD	LYS	A	403	69.733	47.871	2.535	1.00	38.41	C
ATOM	2161	CE	LYS	A	403	68.425	47.321	1.989	1.00	38.28	C
ATOM	2162	NZ	LYS	A	403	68.123	45.957	2.514	1.00	36.94	N
ATOM	2163	N	GLU	A	404	66.255	51.746	1.697	1.00	39.27	N
ATOM	2164	CA	GLU	A	404	65.159	52.567	2.169	1.00	39.45	C
ATOM	2165	C	GLU	A	404	65.108	52.518	3.682	1.00	38.83	C
ATOM	2166	O	GLU	A	404	65.459	51.509	4.297	1.00	37.69	O
ATOM	2167	CB	GLU	A	404	63.840	52.060	1.609	1.00	41.56	C
ATOM	2168	CG	GLU	A	404	63.763	52.059	0.103	1.00	45.30	C
ATOM	2169	CD	GLU	A	404	62.435	51.539	-0.384	1.00	46.12	C
ATOM	2170	OE1	GLU	A	404	62.155	50.338	-0.167	1.00	47.85	O
ATOM	2171	OE2	GLU	A	404	61.673	52.334	-0.971	1.00	47.62	O
ATOM	2172	N	TYR	A	405	64.665	53.616	4.275	1.00	38.06	N
ATOM	2173	CA	TYR	A	405	64.550	53.700	5.717	1.00	37.61	C
ATOM	2174	C	TYR	A	405	63.512	54.746	6.066	1.00	36.92	C
ATOM	2175	O	TYR	A	405	63.619	55.899	5.658	1.00	37.99	O
ATOM	2176	CB	TYR	A	405	65.892	54.078	6.335	1.00	37.41	C
ATOM	2177	CG	TYR	A	405	65.857	54.147	7.842	1.00	37.40	C
ATOM	2178	CD1	TYR	A	405	65.593	53.013	8.603	1.00	36.23	C

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ATOM	2179	CD2	TYR	A	405	66.084	55.349	8.507	1.00	38.07	C
ATOM	2180	CE1	TYR	A	405	65.557	53.072	9.990	1.00	36.68	C
ATOM	2181	CE2	TYR	A	405	66.049	55.417	9.892	1.00	38.81	C
ATOM	2182	CZ	TYR	A	405	65.784	54.274	10.627	1.00	36.81	C
ATOM	2183	OH	TYR	A	405	65.736	54.345	11.999	1.00	37.95	O
ATOM	2184	N	TRP	A	406	62.498	54.336	6.813	1.00	35.74	N
ATOM	2185	CA	TRP	A	406	61.450	55.256	7.214	1.00	34.25	C
ATOM	2186	C	TRP	A	406	61.075	54.979	8.661	1.00	34.05	C
ATOM	2187	O	TRP	A	406	61.165	53.841	9.126	1.00	33.82	O
ATOM	2188	CB	TRP	A	406	60.232	55.113	6.281	1.00	32.23	C
ATOM	2189	CG	TRP	A	406	59.577	53.763	6.285	1.00	29.53	C
ATOM	2190	CD1	TRP	A	406	58.605	53.327	7.138	1.00	29.14	C
ATOM	2191	CD2	TRP	A	406	59.874	52.659	5.419	1.00	29.51	C
ATOM	2192	NE1	TRP	A	406	58.280	52.023	6.860	1.00	28.25	N
ATOM	2193	CE2	TRP	A	406	59.045	51.586	5.811	1.00	28.80	C
ATOM	2194	CE3	TRP	A	406	60.764	52.472	4.350	1.00	30.06	C
ATOM	2195	CZ2	TRP	A	406	59.077	50.337	5.173	1.00	29.23	C
ATOM	2196	CZ3	TRP	A	406	60.797	51.230	3.713	1.00	30.49	C
ATOM	2197	CH2	TRP	A	406	59.956	50.178	4.131	1.00	30.09	C
ATOM	2198	N	GLY	A	407	60.682	56.030	9.372	1.00	33.97	N
ATOM	2199	CA	GLY	A	407	60.300	55.883	10.763	1.00	35.09	C
ATOM	2200	C	GLY	A	407	58.921	55.270	10.912	1.00	35.29	C
ATOM	2201	O	GLY	A	407	58.124	55.281	9.978	1.00	34.78	O
ATOM	2202	N	GLU	A	408	58.640	54.723	12.090	1.00	35.40	N
ATOM	2203	CA	GLU	A	408	57.347	54.112	12.356	1.00	35.13	C
ATOM	2204	C	GLU	A	408	56.273	55.189	12.468	1.00	36.19	C
ATOM	2205	O	GLU	A	408	55.081	54.899	12.408	1.00	35.83	O
ATOM	2206	CB	GLU	A	408	57.414	53.295	13.647	1.00	33.46	C
ATOM	2207	CG	GLU	A	408	58.193	51.999	13.498	1.00	32.80	C
ATOM	2208	CD	GLU	A	408	57.499	51.006	12.569	1.00	31.60	C
ATOM	2209	OE1	GLU	A	408	56.402	50.534	12.918	1.00	29.78	O
ATOM	2210	OE2	GLU	A	408	58.047	50.701	11.490	1.00	31.44	O
ATOM	2211	N	GLY	A	409	56.709	56.436	12.619	1.00	37.77	N
ATOM	2212	CA	GLY	A	409	55.773	57.539	12.734	1.00	39.49	C
ATOM	2213	C	GLY	A	409	55.400	58.156	11.397	1.00	40.71	C
ATOM	2214	O	GLY	A	409	54.482	58.970	11.323	1.00	40.61	O
ATOM	2215	N	SER	A	410	56.109	57.782	10.338	1.00	42.27	N
ATOM	2216	CA	SER	A	410	55.813	58.318	9.013	1.00	44.24	C
ATOM	2217	C	SER	A	410	54.485	57.742	8.526	1.00	45.74	C
ATOM	2218	O	SER	A	410	54.065	56.672	8.968	1.00	44.79	O
ATOM	2219	CB	SER	A	410	56.917	57.952	8.017	1.00	43.45	C
ATOM	2220	OG	SER	A	410	56.832	56.587	7.641	1.00	44.08	O
ATOM	2221	N	SER	A	411	53.828	58.457	7.618	1.00	48.17	N
ATOM	2222	CA	SER	A	411	52.556	57.998	7.081	1.00	50.72	C
ATOM	2223	C	SER	A	411	52.777	56.708	6.301	1.00	51.98	C
ATOM	2224	O	SER	A	411	51.885	55.865	6.205	1.00	51.95	O
ATOM	2225	CB	SER	A	411	51.947	59.064	6.170	1.00	51.02	C
ATOM	2226	OG	SER	A	411	52.832	59.393	5.116	1.00	52.23	O
ATOM	2227	N	ARG	A	412	53.978	56.555	5.754	1.00	53.68	N
ATOM	2228	CA	ARG	A	412	54.323	55.363	4.989	1.00	55.96	C
ATOM	2229	C	ARG	A	412	54.226	54.083	5.819	1.00	58.17	C
ATOM	2230	O	ARG	A	412	54.018	53.000	5.275	1.00	57.86	O
ATOM	2231	CB	ARG	A	412	55.741	55.491	4.419	1.00	54.66	C
ATOM	2232	CG	ARG	A	412	56.208	54.242	3.687	1.00	53.34	C
ATOM	2233	CD	ARG	A	412	57.550	54.426	3.003	1.00	51.73	C
ATOM	2234	NE	ARG	A	412	57.933	53.211	2.288	1.00	50.66	N
ATOM	2235	CZ	ARG	A	412	59.023	53.086	1.539	1.00	51.11	C

TABLE 4

ATOM	2236	NH1	ARG	A	412	59.860	54.108	1.396	1.00	50.38	N
ATOM	2237	NH2	ARG	A	412	59.276	51.935	0.929	1.00	51.44	N
ATOM	2238	N	ALA	A	413	54.374	54.212	7.134	1.00	61.58	N
ATOM	2239	CA	ALA	A	413	54.321	53.057	8.031	1.00	64.71	C
ATOM	2240	C	ALA	A	413	52.976	52.880	8.733	1.00	67.35	C
ATOM	2241	O	ALA	A	413	52.495	51.757	8.877	1.00	66.86	O
ATOM	2242	CB	ALA	A	413	55.436	53.165	9.067	1.00	63.82	C
ATOM	2243	N	ARG	A	414	52.386	53.987	9.179	1.00	71.43	N
ATOM	2244	CA	ARG	A	414	51.102	53.948	9.874	1.00	75.31	C
ATOM	2245	C	ARG	A	414	49.999	53.373	8.991	1.00	77.02	C
ATOM	2246	O	ARG	A	414	49.031	52.789	9.485	1.00	77.08	O
ATOM	2247	CB	ARG	A	414	50.683	55.353	10.322	1.00	76.52	C
ATOM	2248	CG	ARG	A	414	51.456	55.939	11.491	1.00	78.03	C
ATOM	2249	CD	ARG	A	414	50.703	57.153	12.026	1.00	80.11	C
ATOM	2250	NE	ARG	A	414	51.381	57.807	13.142	1.00	81.88	N
ATOM	2251	CZ	ARG	A	414	50.844	58.779	13.874	1.00	82.61	C
ATOM	2252	NH1	ARG	A	414	49.617	59.210	13.612	1.00	83.27	N
ATOM	2253	NH2	ARG	A	414	51.532	59.325	14.867	1.00	83.16	N
ATOM	2254	N	ASN	A	415	50.154	53.546	7.683	1.00	78.97	N
ATOM	2255	CA	ASN	A	415	49.170	53.058	6.725	1.00	81.09	C
ATOM	2256	C	ASN	A	415	49.252	51.540	6.520	1.00	81.85	C
ATOM	2257	O	ASN	A	415	49.489	51.069	5.403	1.00	81.77	O
ATOM	2258	CB	ASN	A	415	49.356	53.774	5.380	1.00	82.25	C
ATOM	2259	CG	ASN	A	415	48.070	53.845	4.568	1.00	83.78	C
ATOM	2260	OD1	ASN	A	415	47.434	52.825	4.295	1.00	84.64	O
ATOM	2261	ND2	ASN	A	415	47.681	55.055	4.181	1.00	84.44	N
ATOM	2262	N	TRP	A	416	49.055	50.778	7.598	1.00	82.26	N
ATOM	2263	CA	TRP	A	416	49.095	49.316	7.519	1.00	82.50	C
ATOM	2264	C	TRP	A	416	47.758	48.722	7.927	1.00	82.72	C
ATOM	2265	O	TRP	A	416	47.554	47.515	7.823	1.00	83.08	O
ATOM	2266	CB	TRP	A	416	50.209	48.732	8.412	1.00	82.13	C
ATOM	2267	CG	TRP	A	416	49.928	48.742	9.894	1.00	81.82	C
ATOM	2268	CD1	TRP	A	416	50.244	49.730	10.781	1.00	82.00	C
ATOM	2269	CD2	TRP	A	416	49.273	47.714	10.659	1.00	81.56	C
ATOM	2270	NE1	TRP	A	416	49.830	49.385	12.048	1.00	81.96	N
ATOM	2271	CE2	TRP	A	416	49.230	48.154	12.001	1.00	81.69	C
ATOM	2272	CE3	TRP	A	416	48.716	46.467	10.339	1.00	81.07	C
ATOM	2273	CZ2	TRP	A	416	48.652	47.390	13.026	1.00	81.58	C
ATOM	2274	CZ3	TRP	A	416	48.140	45.706	11.359	1.00	80.88	C
ATOM	2275	CH2	TRP	A	416	48.113	46.173	12.685	1.00	81.28	C
ATOM	2276	N	SER	A	428	47.786	65.086	7.718	1.00	95.79	N
ATOM	2277	CA	SER	A	428	48.357	66.353	7.278	1.00	95.93	C
ATOM	2278	C	SER	A	428	49.676	66.643	7.988	1.00	96.13	C
ATOM	2279	O	SER	A	428	50.268	67.709	7.812	1.00	96.06	O
ATOM	2280	CB	SER	A	428	47.367	67.497	7.532	1.00	95.59	C
ATOM	2281	OG	SER	A	428	47.047	67.610	8.907	1.00	95.03	O
ATOM	2282	N	PHE	A	429	50.134	65.687	8.789	1.00	96.33	N
ATOM	2283	CA	PHE	A	429	51.384	65.837	9.525	1.00	96.45	C
ATOM	2284	C	PHE	A	429	52.185	64.541	9.412	1.00	95.70	C
ATOM	2285	O	PHE	A	429	51.867	63.685	8.586	1.00	95.85	O
ATOM	2286	CB	PHE	A	429	51.091	66.156	10.995	1.00	97.56	C
ATOM	2287	CG	PHE	A	429	52.269	66.717	11.741	1.00	98.75	C
ATOM	2288	CD1	PHE	A	429	52.886	67.889	11.311	1.00	99.16	C
ATOM	2289	CD2	PHE	A	429	52.771	66.069	12.866	1.00	99.35	C
ATOM	2290	CE1	PHE	A	429	53.987	68.410	11.989	1.00	99.58	C
ATOM	2291	CE2	PHE	A	429	53.872	66.581	13.553	1.00	99.81	C
ATOM	2292	CZ	PHE	A	429	54.481	67.754	13.113	1.00	99.76	C

TABLE 4

ATOM	2293	N	GLU A 430	53.222	64.395	10.235	1.00	94.58	N
ATOM	2294	CA	GLU A 430	54.047	63.191	10.205	1.00	93.27	C
ATOM	2295	C	GLU A 430	55.093	63.181	11.320	1.00	91.79	C
ATOM	2296	O	GLU A 430	55.884	64.115	11.453	1.00	91.62	O
ATOM	2297	CB	GLU A 430	54.728	63.065	8.841	1.00	94.00	C
ATOM	2298	CG	GLU A 430	55.300	61.691	8.559	1.00	94.70	C
ATOM	2299	CD	GLU A 430	55.471	61.436	7.076	1.00	95.05	C
ATOM	2300	OE1	GLU A 430	54.459	61.503	6.346	1.00	95.03	O
ATOM	2301	OE2	GLU A 430	56.612	61.168	6.642	1.00	95.48	O
ATOM	2302	N	GLU A 431	55.092	62.110	12.110	1.00	89.87	N
ATOM	2303	CA	GLU A 431	56.014	61.960	13.234	1.00	87.81	C
ATOM	2304	C	GLU A 431	57.423	61.519	12.843	1.00	85.39	C
ATOM	2305	O	GLU A 431	58.356	61.618	13.643	1.00	85.00	O
ATOM	2306	CB	GLU A 431	55.437	60.973	14.257	1.00	89.03	C
ATOM	2307	CG	GLU A 431	54.235	61.494	15.044	1.00	90.63	C
ATOM	2308	CD	GLU A 431	53.091	61.955	14.153	1.00	91.93	C
ATOM	2309	OE1	GLU A 431	52.602	61.144	13.336	1.00	92.15	O
ATOM	2310	OE2	GLU A 431	52.678	63.130	14.274	1.00	92.38	O
ATOM	2311	N	GLY A 432	57.577	61.031	11.618	1.00	82.69	N
ATOM	2312	CA	GLY A 432	58.885	60.587	11.170	1.00	79.01	C
ATOM	2313	C	GLY A 432	59.146	60.936	9.720	1.00	76.48	C
ATOM	2314	O	GLY A 432	58.345	61.623	9.087	1.00	76.66	O
ATOM	2315	N	VAL A 433	60.269	60.464	9.190	1.00	73.56	N
ATOM	2316	CA	VAL A 433	60.615	60.739	7.803	1.00	70.14	C
ATOM	2317	C	VAL A 433	60.915	59.466	7.014	1.00	67.42	C
ATOM	2318	O	VAL A 433	61.128	58.399	7.588	1.00	67.04	O
ATOM	2319	CB	VAL A 433	61.827	61.699	7.710	1.00	70.47	C
ATOM	2320	CG1	VAL A 433	61.451	63.062	8.272	1.00	70.12	C
ATOM	2321	CG2	VAL A 433	63.010	61.124	8.465	1.00	70.31	C
ATOM	2322	N	ASP A 434	60.913	59.598	5.691	1.00	63.84	N
ATOM	2323	CA	ASP A 434	61.173	58.491	4.778	1.00	60.33	C
ATOM	2324	C	ASP A 434	62.386	58.864	3.930	1.00	58.07	C
ATOM	2325	O	ASP A 434	62.300	59.737	3.066	1.00	57.72	O
ATOM	2326	CB	ASP A 434	59.937	58.261	3.899	1.00	60.27	C
ATOM	2327	CG	ASP A 434	60.115	57.123	2.914	1.00	60.71	C
ATOM	2328	OD1	ASP A 434	60.683	56.081	3.297	1.00	61.60	O
ATOM	2329	OD2	ASP A 434	59.669	57.261	1.756	1.00	60.76	O
ATOM	2330	N	SER A 435	63.516	58.207	4.181	1.00	55.22	N
ATOM	2331	CA	SER A 435	64.741	58.509	3.448	1.00	52.53	C
ATOM	2332	C	SER A 435	65.566	57.297	3.028	1.00	49.99	C
ATOM	2333	O	SER A 435	65.072	56.172	2.970	1.00	49.04	O
ATOM	2334	CB	SER A 435	65.620	59.437	4.284	1.00	53.18	C
ATOM	2335	OG	SER A 435	65.947	58.820	5.515	1.00	54.44	O
ATOM	2336	N	TYR A 436	66.838	57.550	2.740	1.00	47.61	N
ATOM	2337	CA	TYR A 436	67.765	56.513	2.307	1.00	45.82	C
ATOM	2338	C	TYR A 436	69.026	56.466	3.168	1.00	44.39	C
ATOM	2339	O	TYR A 436	69.481	57.490	3.685	1.00	44.28	O
ATOM	2340	CB	TYR A 436	68.184	56.764	0.858	1.00	46.81	C
ATOM	2341	CG	TYR A 436	67.075	56.643	-0.159	1.00	47.16	C
ATOM	2342	CD1	TYR A 436	66.584	55.396	-0.537	1.00	47.36	C
ATOM	2343	CD2	TYR A 436	66.527	57.778	-0.754	1.00	48.36	C
ATOM	2344	CE1	TYR A 436	65.575	55.279	-1.485	1.00	49.05	C
ATOM	2345	CE2	TYR A 436	65.515	57.674	-1.706	1.00	49.53	C
ATOM	2346	CZ	TYR A 436	65.046	56.422	-2.066	1.00	49.47	C
ATOM	2347	OH	TYR A 436	64.050	56.312	-3.007	1.00	51.33	O
ATOM	2348	N	VAL A 437	69.585	55.269	3.318	1.00	41.45	N
ATOM	2349	CA	VAL A 437	70.817	55.089	4.072	1.00	38.90	C

TABLE 4

ATOM	2350	C	VAL	A	437	71.765	54.336	3.151	1.00	38.06	C
ATOM	2351	O	VAL	A	437	71.334	53.496	2.366	1.00	37.46	O
ATOM	2352	CB	VAL	A	437	70.600	54.275	5.370	1.00	38.21	C
ATOM	2353	CG1	VAL	A	437	69.639	55.014	6.286	1.00	38.54	C
ATOM	2354	CG2	VAL	A	437	70.086	52.884	5.042	1.00	36.53	C
ATOM	2355	N	PRO	A	438	73.071	54.635	3.226	1.00	37.64	N
ATOM	2356	CA	PRO	A	438	74.049	53.958	2.371	1.00	36.86	C
ATOM	2357	C	PRO	A	438	74.220	52.474	2.674	1.00	36.29	C
ATOM	2358	O	PRO	A	438	74.336	52.069	3.834	1.00	36.41	O
ATOM	2359	CB	PRO	A	438	75.327	54.764	2.608	1.00	36.76	C
ATOM	2360	CG	PRO	A	438	75.175	55.210	4.026	1.00	37.68	C
ATOM	2361	CD	PRO	A	438	73.725	55.641	4.080	1.00	37.02	C
ATOM	2362	N	TYR	A	439	74.223	51.671	1.613	1.00	35.21	N
ATOM	2363	CA	TYR	A	439	74.381	50.227	1.717	1.00	34.92	C
ATOM	2364	C	TYR	A	439	75.744	49.913	2.328	1.00	34.83	C
ATOM	2365	O	TYR	A	439	76.768	50.436	1.888	1.00	35.17	O
ATOM	2366	CB	TYR	A	439	74.267	49.599	0.325	1.00	34.07	C
ATOM	2367	CG	TYR	A	439	74.418	48.098	0.299	1.00	33.14	C
ATOM	2368	CD1	TYR	A	439	73.561	47.279	1.029	1.00	32.78	C
ATOM	2369	CD2	TYR	A	439	75.407	47.494	-0.478	1.00	34.43	C
ATOM	2370	CE1	TYR	A	439	73.682	45.892	0.984	1.00	34.47	C
ATOM	2371	CE2	TYR	A	439	75.536	46.110	-0.529	1.00	34.40	C
ATOM	2372	CZ	TYR	A	439	74.670	45.317	0.202	1.00	34.68	C
ATOM	2373	OH	TYR	A	439	74.791	43.949	0.148	1.00	36.73	O
ATOM	2374	N	ALA	A	440	75.752	49.051	3.337	1.00	34.57	N
ATOM	2375	CA	ALA	A	440	76.990	48.696	4.019	1.00	34.81	C
ATOM	2376	C	ALA	A	440	77.361	47.225	3.860	1.00	34.72	C
ATOM	2377	O	ALA	A	440	78.375	46.776	4.390	1.00	34.93	O
ATOM	2378	CB	ALA	A	440	76.874	49.047	5.502	1.00	33.67	C
ATOM	2379	N	GLY	A	441	76.542	46.474	3.134	1.00	34.47	N
ATOM	2380	CA	GLY	A	441	76.833	45.066	2.945	1.00	34.40	C
ATOM	2381	C	GLY	A	441	76.172	44.203	4.003	1.00	34.97	C
ATOM	2382	O	GLY	A	441	75.144	44.581	4.567	1.00	35.10	O
ATOM	2383	N	LYS	A	442	76.763	43.043	4.276	1.00	35.43	N
ATOM	2384	CA	LYS	A	442	76.226	42.110	5.265	1.00	35.71	C
ATOM	2385	C	LYS	A	442	76.421	42.615	6.694	1.00	34.74	C
ATOM	2386	O	LYS	A	442	77.415	43.272	7.005	1.00	33.81	O
ATOM	2387	CB	LYS	A	442	76.909	40.745	5.132	1.00	37.45	C
ATOM	2388	CG	LYS	A	442	76.860	40.138	3.739	1.00	41.47	C
ATOM	2389	CD	LYS	A	442	75.891	38.966	3.666	1.00	44.08	C
ATOM	2390	CE	LYS	A	442	74.461	39.409	3.914	1.00	47.03	C
ATOM	2391	NZ	LYS	A	442	73.508	38.265	3.826	1.00	49.47	N
ATOM	2392	N	LEU	A	443	75.466	42.282	7.555	1.00	33.84	N
ATOM	2393	CA	LEU	A	443	75.497	42.663	8.962	1.00	33.05	C
ATOM	2394	C	LEU	A	443	76.769	42.197	9.681	1.00	33.87	C
ATOM	2395	O	LEU	A	443	77.401	42.968	10.398	1.00	32.69	O
ATOM	2396	CB	LEU	A	443	74.265	42.084	9.672	1.00	31.90	C
ATOM	2397	CG	LEU	A	443	74.104	42.252	11.190	1.00	31.99	C
ATOM	2398	CD1	LEU	A	443	72.651	42.031	11.568	1.00	31.10	C
ATOM	2399	CD2	LEU	A	443	75.001	41.274	11.935	1.00	31.47	C
ATOM	2400	N	LYS	A	444	77.135	40.934	9.481	1.00	34.24	N
ATOM	2401	CA	LYS	A	444	78.304	40.344	10.134	1.00	36.18	C
ATOM	2402	C	LYS	A	444	79.587	41.182	10.174	1.00	35.95	C
ATOM	2403	O	LYS	A	444	80.089	41.499	11.252	1.00	36.11	O
ATOM	2404	CB	LYS	A	444	78.621	38.981	9.510	1.00	37.74	C
ATOM	2405	CG	LYS	A	444	79.746	38.236	10.219	1.00	41.26	C
ATOM	2406	CD	LYS	A	444	79.871	36.804	9.720	1.00	44.01	C



TABLE 4

ATOM	2407	CE	LYS	A	444	80.857	36.013	10.560	1.00	44.57	C
ATOM	2408	NZ	LYS	A	444	82.223	36.599	10.490	1.00	46.17	N
ATOM	2409	N	ASP	A	445	80.113	41.530	9.005	1.00	35.90	N
ATOM	2410	CA	ASP	A	445	81.347	42.301	8.904	1.00	36.42	C
ATOM	2411	C	ASP	A	445	81.273	43.666	9.569	1.00	35.53	C
ATOM	2412	O	ASP	A	445	82.241	44.125	10.172	1.00	35.05	O
ATOM	2413	CB	ASP	A	445	81.733	42.490	7.433	1.00	39.61	C
ATOM	2414	CG	ASP	A	445	81.951	41.172	6.713	1.00	42.27	C
ATOM	2415	OD1	ASP	A	445	82.810	40.383	7.163	1.00	43.65	O
ATOM	2416	OD2	ASP	A	445	81.262	40.927	5.700	1.00	45.22	O
ATOM	2417	N	ASN	A	446	80.126	44.317	9.447	1.00	34.05	N
ATOM	2418	CA	ASN	A	446	79.945	45.639	10.027	1.00	33.14	C
ATOM	2419	C	ASN	A	446	79.862	45.596	11.547	1.00	32.11	C
ATOM	2420	O	ASN	A	446	80.506	46.394	12.227	1.00	31.82	O
ATOM	2421	CB	ASN	A	446	78.693	46.281	9.439	1.00	34.11	C
ATOM	2422	CG	ASN	A	446	78.853	46.608	7.969	1.00	35.94	C
ATOM	2423	OD1	ASN	A	446	79.391	47.659	7.612	1.00	37.15	O
ATOM	2424	ND2	ASN	A	446	78.406	45.698	7.104	1.00	33.70	N
ATOM	2425	N	VAL	A	447	79.071	44.669	12.078	1.00	31.18	N
ATOM	2426	CA	VAL	A	447	78.929	44.533	13.523	1.00	30.87	C
ATOM	2427	C	VAL	A	447	80.273	44.161	14.154	1.00	31.57	C
ATOM	2428	O	VAL	A	447	80.621	44.637	15.233	1.00	31.53	O
ATOM	2429	CB	VAL	A	447	77.883	43.454	13.882	1.00	30.26	C
ATOM	2430	CG1	VAL	A	447	77.995	43.087	15.354	1.00	29.78	C
ATOM	2431	CG2	VAL	A	447	76.490	43.969	13.581	1.00	29.08	C
ATOM	2432	N	GLU	A	448	81.030	43.313	13.468	1.00	31.62	N
ATOM	2433	CA	GLU	A	448	82.326	42.887	13.971	1.00	33.06	C
ATOM	2434	C	GLU	A	448	83.279	44.082	14.049	1.00	31.22	C
ATOM	2435	O	GLU	A	448	83.975	44.257	15.042	1.00	29.89	O
ATOM	2436	CB	GLU	A	448	82.900	41.790	13.066	1.00	35.76	C
ATOM	2437	CG	GLU	A	448	84.250	41.240	13.503	1.00	41.89	C
ATOM	2438	CD	GLU	A	448	84.719	40.085	12.623	1.00	46.86	C
ATOM	2439	OE1	GLU	A	448	84.030	39.037	12.596	1.00	49.61	O
ATOM	2440	OE2	GLU	A	448	85.770	40.228	11.957	1.00	47.95	O
ATOM	2441	N	ALA	A	449	83.302	44.904	13.004	1.00	29.89	N
ATOM	2442	CA	ALA	A	449	84.167	46.083	12.982	1.00	29.27	C
ATOM	2443	C	ALA	A	449	83.764	47.074	14.075	1.00	28.76	C
ATOM	2444	O	ALA	A	449	84.619	47.677	14.725	1.00	28.88	O
ATOM	2445	CB	ALA	A	449	84.099	46.764	11.616	1.00	28.30	C
ATOM	2446	N	SER	A	450	82.460	47.243	14.267	1.00	27.76	N
ATOM	2447	CA	SER	A	450	81.947	48.157	15.282	1.00	27.63	C
ATOM	2448	C	SER	A	450	82.321	47.712	16.691	1.00	27.22	C
ATOM	2449	O	SER	A	450	82.815	48.507	17.490	1.00	26.61	O
ATOM	2450	CB	SER	A	450	80.421	48.272	15.182	1.00	27.03	C
ATOM	2451	OG	SER	A	450	80.037	49.038	14.053	1.00	28.56	O
ATOM	2452	N	LEU	A	451	82.086	46.437	16.989	1.00	26.98	N
ATOM	2453	CA	LEU	A	451	82.378	45.906	18.310	1.00	27.66	C
ATOM	2454	C	LEU	A	451	83.870	45.755	18.598	1.00	29.12	C
ATOM	2455	O	LEU	A	451	84.270	45.719	19.758	1.00	28.46	O
ATOM	2456	CB	LEU	A	451	81.638	44.580	18.522	1.00	26.68	C
ATOM	2457	CG	LEU	A	451	80.112	44.754	18.493	1.00	26.86	C
ATOM	2458	CD1	LEU	A	451	79.422	43.455	18.852	1.00	24.50	C
ATOM	2459	CD2	LEU	A	451	79.704	45.860	19.461	1.00	26.58	C
ATOM	2460	N	ASN	A	452	84.697	45.671	17.559	1.00	30.10	N
ATOM	2461	CA	ASN	A	452	86.132	45.577	17.795	1.00	31.68	C
ATOM	2462	C	ASN	A	452	86.595	46.926	18.323	1.00	31.06	C
ATOM	2463	O	ASN	A	452	87.470	46.999	19.187	1.00	30.69	O

TABLE 4

ATOM	2464	CB	ASN	A	452	86.907	45.230	16.519	1.00	33.39	C
ATOM	2465	CG	ASN	A	452	86.881	43.747	16.208	1.00	37.58	C
ATOM	2466	OD1	ASN	A	452	86.800	42.908	17.113	1.00	40.20	O
ATOM	2467	ND2	ASN	A	452	86.969	43.411	14.925	1.00	39.30	N
ATOM	2468	N	LYS	A	453	86.000	47.996	17.805	1.00	30.67	N
ATOM	2469	CA	LYS	A	453	86.358	49.334	18.256	1.00	31.02	C
ATOM	2470	C	LYS	A	453	85.863	49.550	19.680	1.00	28.53	C
ATOM	2471	O	LYS	A	453	86.549	50.170	20.489	1.00	28.63	O
ATOM	2472	CB	LYS	A	453	85.779	50.407	17.326	1.00	32.56	C
ATOM	2473	CG	LYS	A	453	86.475	50.454	15.974	1.00	38.18	C
ATOM	2474	CD	LYS	A	453	86.326	51.813	15.290	1.00	40.85	C
ATOM	2475	CE	LYS	A	453	84.888	52.108	14.928	1.00	43.86	C
ATOM	2476	NZ	LYS	A	453	84.745	53.424	14.236	1.00	45.10	N
ATOM	2477	N	VAL	A	454	84.674	49.041	19.982	1.00	26.35	N
ATOM	2478	CA	VAL	A	454	84.121	49.168	21.321	1.00	25.14	C
ATOM	2479	C	VAL	A	454	85.037	48.436	22.305	1.00	25.64	C
ATOM	2480	O	VAL	A	454	85.395	48.980	23.352	1.00	24.53	O
ATOM	2481	CB	VAL	A	454	82.700	48.566	21.409	1.00	25.38	C
ATOM	2482	CG1	VAL	A	454	82.241	48.504	22.869	1.00	24.56	C
ATOM	2483	CG2	VAL	A	454	81.725	49.413	20.589	1.00	24.60	C
ATOM	2484	N	LYS	A	455	85.419	47.208	21.956	1.00	25.47	N
ATOM	2485	CA	LYS	A	455	86.290	46.393	22.805	1.00	26.49	C
ATOM	2486	C	LYS	A	455	87.634	47.073	23.053	1.00	27.06	C
ATOM	2487	O	LYS	A	455	88.162	47.051	24.165	1.00	26.76	O
ATOM	2488	CB	LYS	A	455	86.534	45.030	22.157	1.00	26.81	C
ATOM	2489	CG	LYS	A	455	85.335	44.099	22.139	1.00	27.88	C
ATOM	2490	CD	LYS	A	455	85.653	42.889	21.279	1.00	29.25	C
ATOM	2491	CE	LYS	A	455	84.558	41.857	21.344	1.00	32.72	C
ATOM	2492	NZ	LYS	A	455	84.871	40.695	20.464	1.00	33.72	N
ATOM	2493	N	SER	A	456	88.185	47.664	22.000	1.00	26.88	N
ATOM	2494	CA	SER	A	456	89.463	48.355	22.084	1.00	28.22	C
ATOM	2495	C	SER	A	456	89.356	49.563	23.021	1.00	27.71	C
ATOM	2496	O	SER	A	456	90.221	49.788	23.868	1.00	27.11	O
ATOM	2497	CB	SER	A	456	89.896	48.801	20.684	1.00	29.36	C
ATOM	2498	OG	SER	A	456	91.173	49.401	20.715	1.00	32.57	O
ATOM	2499	N	THR	A	457	88.289	50.339	22.866	1.00	26.02	N
ATOM	2500	CA	THR	A	457	88.083	51.502	23.713	1.00	25.29	C
ATOM	2501	C	THR	A	457	87.905	51.052	25.159	1.00	24.88	C
ATOM	2502	O	THR	A	457	88.407	51.692	26.083	1.00	25.60	O
ATOM	2503	CB	THR	A	457	86.847	52.297	23.269	1.00	24.46	C
ATOM	2504	OG1	THR	A	457	87.013	52.689	21.904	1.00	26.98	O
ATOM	2505	CG2	THR	A	457	86.677	53.541	24.113	1.00	21.68	C
ATOM	2506	N	MET	A	458	87.192	49.948	25.355	1.00	24.86	N
ATOM	2507	CA	MET	A	458	86.977	49.430	26.697	1.00	23.62	C
ATOM	2508	C	MET	A	458	88.314	49.140	27.363	1.00	24.86	C
ATOM	2509	O	MET	A	458	88.496	49.424	28.545	1.00	25.51	O
ATOM	2510	CB	MET	A	458	86.097	48.179	26.653	1.00	23.91	C
ATOM	2511	CG	MET	A	458	84.603	48.501	26.525	1.00	23.56	C
ATOM	2512	SD	MET	A	458	83.557	47.082	26.176	1.00	24.90	S
ATOM	2513	CE	MET	A	458	83.569	46.235	27.743	1.00	23.81	C
ATOM	2514	N	CYS	A	459	89.268	48.599	26.613	1.00	26.31	N
ATOM	2515	CA	CYS	A	459	90.567	48.321	27.213	1.00	27.49	C
ATOM	2516	C	CYS	A	459	91.294	49.613	27.561	1.00	27.38	C
ATOM	2517	O	CYS	A	459	92.055	49.655	28.528	1.00	27.52	O
ATOM	2518	CB	CYS	A	459	91.418	47.440	26.300	1.00	29.11	C
ATOM	2519	SG	CYS	A	459	90.985	45.676	26.452	1.00	33.31	S
ATOM	2520	N	ASN	A	460	91.052	50.665	26.780	1.00	26.76	N

TABLE 4

ATOM	2521	CA	ASN A 460	91.659	51.966	27.053	1.00	26.30	C
ATOM	2522	C	ASN A 460	91.112	52.452	28.387	1.00	25.18	C
ATOM	2523	O	ASN A 460	91.780	53.177	29.110	1.00	25.85	O
ATOM	2524	CB	ASN A 460	91.284	52.996	25.983	1.00	26.49	C
ATOM	2525	CG	ASN A 460	91.974	52.753	24.662	1.00	27.93	C
ATOM	2526	OD1	ASN A 460	91.321	52.628	23.629	1.00	30.37	O
ATOM	2527	ND2	ASN A 460	93.301	52.698	24.683	1.00	27.47	N
ATOM	2528	N	CYS A 461	89.886	52.049	28.704	1.00	24.75	N
ATOM	2529	CA	CYS A 461	89.245	52.468	29.946	1.00	24.35	C
ATOM	2530	C	CYS A 461	89.471	51.485	31.093	1.00	24.59	C
ATOM	2531	O	CYS A 461	88.929	51.663	32.179	1.00	24.19	O
ATOM	2532	CB	CYS A 461	87.738	52.665	29.716	1.00	25.37	C
ATOM	2533	SG	CYS A 461	87.342	53.931	28.465	1.00	26.44	S
ATOM	2534	N	GLY A 462	90.266	50.449	30.839	1.00	25.17	N
ATOM	2535	CA	GLY A 462	90.562	49.454	31.857	1.00	24.26	C
ATOM	2536	C	GLY A 462	89.424	48.490	32.136	1.00	25.01	C
ATOM	2537	O	GLY A 462	89.300	47.970	33.250	1.00	25.14	O
ATOM	2538	N	ALA A 463	88.601	48.228	31.127	1.00	23.44	N
ATOM	2539	CA	ALA A 463	87.462	47.339	31.302	1.00	23.93	C
ATOM	2540	C	ALA A 463	87.479	46.110	30.397	1.00	24.29	C
ATOM	2541	O	ALA A 463	87.688	46.216	29.185	1.00	23.39	O
ATOM	2542	CB	ALA A 463	86.169	48.122	31.085	1.00	21.46	C
ATOM	2543	N	LEU A 464	87.245	44.950	31.002	1.00	24.49	N
ATOM	2544	CA	LEU A 464	87.195	43.686	30.275	1.00	26.40	C
ATOM	2545	C	LEU A 464	85.749	43.260	30.066	1.00	25.77	C
ATOM	2546	O	LEU A 464	85.476	42.351	29.287	1.00	27.45	O
ATOM	2547	CB	LEU A 464	87.936	42.582	31.039	1.00	27.85	C
ATOM	2548	CG	LEU A 464	89.448	42.499	30.823	1.00	29.66	C
ATOM	2549	CD1	LEU A 464	90.024	41.335	31.630	1.00	31.06	C
ATOM	2550	CD2	LEU A 464	89.730	42.304	29.349	1.00	30.29	C
ATOM	2551	N	THR A 465	84.829	43.909	30.775	1.00	25.23	N
ATOM	2552	CA	THR A 465	83.406	43.603	30.656	1.00	24.98	C
ATOM	2553	C	THR A 465	82.589	44.893	30.684	1.00	25.79	C
ATOM	2554	O	THR A 465	83.096	45.955	31.057	1.00	24.88	O
ATOM	2555	CB	THR A 465	82.913	42.719	31.812	1.00	25.00	C
ATOM	2556	OG1	THR A 465	82.998	43.458	33.035	1.00	24.92	O
ATOM	2557	CG2	THR A 465	83.757	41.447	31.921	1.00	24.20	C
ATOM	2558	N	ILE A 466	81.323	44.801	30.293	1.00	24.73	N
ATOM	2559	CA	ILE A 466	80.470	45.977	30.294	1.00	24.59	C
ATOM	2560	C	ILE A 466	80.269	46.503	31.717	1.00	24.91	C
ATOM	2561	O	ILE A 466	80.359	47.702	31.952	1.00	26.03	O
ATOM	2562	CB	ILE A 466	79.117	45.672	29.616	1.00	24.22	C
ATOM	2563	CG1	ILE A 466	79.340	45.548	28.104	1.00	22.81	C
ATOM	2564	CG2	ILE A 466	78.095	46.761	29.931	1.00	20.91	C
ATOM	2565	CD1	ILE A 466	78.132	45.051	27.344	1.00	23.02	C
ATOM	2566	N	PRO A 467	79.997	45.614	32.688	1.00	25.66	N
ATOM	2567	CA	PRO A 467	79.811	46.107	34.058	1.00	25.52	C
ATOM	2568	C	PRO A 467	81.057	46.840	34.566	1.00	26.38	C
ATOM	2569	O	PRO A 467	80.967	47.837	35.284	1.00	25.66	O
ATOM	2570	CB	PRO A 467	79.525	44.829	34.846	1.00	25.82	C
ATOM	2571	CG	PRO A 467	78.798	43.980	33.829	1.00	25.19	C
ATOM	2572	CD	PRO A 467	79.658	44.181	32.596	1.00	24.50	C
ATOM	2573	N	GLN A 468	82.225	46.346	34.183	1.00	26.53	N
ATOM	2574	CA	GLN A 468	83.464	46.968	34.609	1.00	27.70	C
ATOM	2575	C	GLN A 468	83.626	48.344	33.954	1.00	28.31	C
ATOM	2576	O	GLN A 468	84.153	49.279	34.567	1.00	27.56	O
ATOM	2577	CB	GLN A 468	84.631	46.052	34.265	1.00	29.61	C

TABLE 4

ATOM	2578	CG	GLN	A	468	85.932	46.460	34.882	1.00	32.72	C
ATOM	2579	CD	GLN	A	468	86.925	45.320	34.922	1.00	32.87	C
ATOM	2580	OE1	GLN	A	468	87.034	44.540	33.977	1.00	30.31	O
ATOM	2581	NE2	GLN	A	468	87.670	45.231	36.015	1.00	35.10	N
ATOM	2582	N	LEU	A	469	83.156	48.468	32.713	1.00	27.10	N
ATOM	2583	CA	LEU	A	469	83.222	49.734	31.994	1.00	26.38	C
ATOM	2584	C	LEU	A	469	82.286	50.742	32.656	1.00	25.76	C
ATOM	2585	O	LEU	A	469	82.641	51.904	32.840	1.00	24.62	O
ATOM	2586	CB	LEU	A	469	82.809	49.547	30.530	1.00	26.12	C
ATOM	2587	CG	LEU	A	469	82.606	50.848	29.742	1.00	26.70	C
ATOM	2588	CD1	LEU	A	469	83.947	51.530	29.499	1.00	24.80	C
ATOM	2589	CD2	LEU	A	469	81.920	50.538	28.421	1.00	26.30	C
ATOM	2590	N	GLN	A	470	81.092	50.285	33.018	1.00	24.81	N
ATOM	2591	CA	GLN	A	470	80.101	51.148	33.652	1.00	26.06	C
ATOM	2592	C	GLN	A	470	80.595	51.643	35.004	1.00	27.46	C
ATOM	2593	O	GLN	A	470	80.229	52.723	35.473	1.00	27.35	O
ATOM	2594	CB	GLN	A	470	78.779	50.383	33.798	1.00	25.66	C
ATOM	2595	CG	GLN	A	470	78.145	50.108	32.437	1.00	26.19	C
ATOM	2596	CD	GLN	A	470	76.907	49.240	32.484	1.00	27.08	C
ATOM	2597	OE1	GLN	A	470	76.089	49.270	31.561	1.00	28.25	O
ATOM	2598	NE2	GLN	A	470	76.768	48.452	33.537	1.00	24.83	N
ATOM	2599	N	SER	A	471	81.464	50.855	35.611	1.00	27.91	N
ATOM	2600	CA	SER	A	471	82.008	51.194	36.909	1.00	29.16	C
ATOM	2601	C	SER	A	471	83.245	52.094	36.831	1.00	28.62	C
ATOM	2602	O	SER	A	471	83.387	53.028	37.618	1.00	29.46	O
ATOM	2603	CB	SER	A	471	82.346	49.901	37.660	1.00	28.43	C
ATOM	2604	OG	SER	A	471	82.917	50.183	38.920	1.00	33.24	O
ATOM	2605	N	LYS	A	472	84.116	51.832	35.863	1.00	28.60	N
ATOM	2606	CA	LYS	A	472	85.368	52.578	35.732	1.00	28.32	C
ATOM	2607	C	LYS	A	472	85.459	53.725	34.728	1.00	27.50	C
ATOM	2608	O	LYS	A	472	86.386	54.526	34.803	1.00	26.62	O
ATOM	2609	CB	LYS	A	472	86.499	51.591	35.437	1.00	28.80	C
ATOM	2610	CG	LYS	A	472	86.598	50.469	36.445	1.00	29.70	C
ATOM	2611	CD	LYS	A	472	87.547	49.371	35.990	1.00	32.26	C
ATOM	2612	CE	LYS	A	472	88.992	49.826	35.994	1.00	33.68	C
ATOM	2613	NZ	LYS	A	472	89.910	48.692	35.671	1.00	34.81	N
ATOM	2614	N	ALA	A	473	84.523	53.811	33.789	1.00	26.86	N
ATOM	2615	CA	ALA	A	473	84.586	54.866	32.784	1.00	26.51	C
ATOM	2616	C	ALA	A	473	84.672	56.284	33.351	1.00	26.27	C
ATOM	2617	O	ALA	A	473	83.986	56.637	34.313	1.00	26.64	O
ATOM	2618	CB	ALA	A	473	83.394	54.760	31.831	1.00	26.47	C
ATOM	2619	N	LYS	A	474	85.544	57.080	32.742	1.00	25.53	N
ATOM	2620	CA	LYS	A	474	85.746	58.476	33.110	1.00	25.18	C
ATOM	2621	C	LYS	A	474	85.178	59.222	31.911	1.00	25.48	C
ATOM	2622	O	LYS	A	474	85.742	59.190	30.816	1.00	25.05	O
ATOM	2623	CB	LYS	A	474	87.237	58.749	33.293	1.00	23.52	C
ATOM	2624	CG	LYS	A	474	87.842	57.916	34.425	1.00	25.87	C
ATOM	2625	CD	LYS	A	474	89.333	57.657	34.217	1.00	24.85	C
ATOM	2626	CE	LYS	A	474	90.152	58.924	34.356	1.00	25.06	C
ATOM	2627	NZ	LYS	A	474	91.582	58.631	34.061	1.00	25.87	N
ATOM	2628	N	ILE	A	475	84.044	59.881	32.118	1.00	25.73	N
ATOM	2629	CA	ILE	A	475	83.361	60.558	31.025	1.00	25.74	C
ATOM	2630	C	ILE	A	475	83.328	62.069	31.166	1.00	25.52	C
ATOM	2631	O	ILE	A	475	82.858	62.598	32.173	1.00	25.22	O
ATOM	2632	CB	ILE	A	475	81.912	60.020	30.906	1.00	26.10	C
ATOM	2633	CG1	ILE	A	475	81.934	58.482	30.888	1.00	25.99	C
ATOM	2634	CG2	ILE	A	475	81.254	60.550	29.639	1.00	27.00	C

TABLE 4

ATOM	2635	CD1	ILE	A	475	80.559	57.819	30.973	1.00	22.84	C
ATOM	2636	N	THR	A	476	83.833	62.766	30.154	1.00	25.28	N
ATOM	2637	CA	THR	A	476	83.839	64.220	30.199	1.00	24.69	C
ATOM	2638	C	THR	A	476	82.968	64.853	29.137	1.00	24.58	C
ATOM	2639	O	THR	A	476	82.822	64.340	28.026	1.00	23.13	O
ATOM	2640	CB	THR	A	476	85.254	64.819	30.029	1.00	24.42	C
ATOM	2641	OG1	THR	A	476	85.179	66.245	30.177	1.00	24.64	O
ATOM	2642	CG2	THR	A	476	85.817	64.506	28.641	1.00	21.62	C
ATOM	2643	N	LEU	A	477	82.392	65.985	29.504	1.00	25.11	N
ATOM	2644	CA	LEU	A	477	81.568	66.751	28.599	1.00	26.78	C
ATOM	2645	C	LEU	A	477	82.580	67.571	27.798	1.00	26.72	C
ATOM	2646	O	LEU	A	477	83.672	67.855	28.290	1.00	26.01	O
ATOM	2647	CB	LEU	A	477	80.645	67.668	29.405	1.00	27.13	C
ATOM	2648	CG	LEU	A	477	79.566	68.443	28.661	1.00	28.34	C
ATOM	2649	CD1	LEU	A	477	78.598	67.476	27.985	1.00	27.41	C
ATOM	2650	CD2	LEU	A	477	78.838	69.331	29.653	1.00	29.11	C
ATOM	2651	N	VAL	A	478	82.221	67.924	26.569	1.00	27.82	N
ATOM	2652	CA	VAL	A	478	83.075	68.708	25.678	1.00	28.66	C
ATOM	2653	C	VAL	A	478	82.407	70.062	25.415	1.00	29.15	C
ATOM	2654	O	VAL	A	478	81.186	70.143	25.327	1.00	28.79	O
ATOM	2655	CB	VAL	A	478	83.275	67.964	24.342	1.00	30.20	C
ATOM	2656	CG1	VAL	A	478	83.918	68.870	23.326	1.00	33.41	C
ATOM	2657	CG2	VAL	A	478	84.133	66.731	24.563	1.00	30.57	C
ATOM	2658	N	SER	A	479	83.200	71.121	25.288	1.00	29.64	N
ATOM	2659	CA	SER	A	479	82.645	72.455	25.054	1.00	31.24	C
ATOM	2660	C	SER	A	479	82.016	72.595	23.675	1.00	32.88	C
ATOM	2661	O	SER	A	479	82.376	71.878	22.745	1.00	32.90	O
ATOM	2662	CB	SER	A	479	83.731	73.523	25.208	1.00	28.66	C
ATOM	2663	OG	SER	A	479	84.669	73.432	24.151	1.00	29.51	O
ATOM	2664	N	SER	A	480	81.075	73.528	23.556	1.00	36.21	N
ATOM	2665	CA	SER	A	480	80.389	73.798	22.290	1.00	40.17	C
ATOM	2666	C	SER	A	480	81.393	74.060	21.172	1.00	41.93	C
ATOM	2667	O	SER	A	480	81.303	73.479	20.091	1.00	42.38	O
ATOM	2668	CB	SER	A	480	79.487	75.026	22.429	1.00	40.09	C
ATOM	2669	OG	SER	A	480	78.558	74.864	23.482	1.00	42.83	O
ATOM	2670	N	VAL	A	481	82.346	74.948	21.447	1.00	44.79	N
ATOM	2671	CA	VAL	A	481	83.377	75.316	20.483	1.00	47.03	C
ATOM	2672	C	VAL	A	481	84.169	74.125	19.958	1.00	48.55	C
ATOM	2673	O	VAL	A	481	84.514	74.083	18.778	1.00	49.15	O
ATOM	2674	CB	VAL	A	481	84.368	76.327	21.091	1.00	46.95	C
ATOM	2675	CG1	VAL	A	481	85.504	76.593	20.111	1.00	47.91	C
ATOM	2676	CG2	VAL	A	481	83.646	77.625	21.420	1.00	47.48	C
ATOM	2677	N	SER	A	482	84.466	73.168	20.832	1.00	50.46	N
ATOM	2678	CA	SER	A	482	85.219	71.982	20.438	1.00	52.74	C
ATOM	2679	C	SER	A	482	84.505	71.250	19.312	1.00	54.09	C
ATOM	2680	O	SER	A	482	85.131	70.520	18.543	1.00	54.30	O
ATOM	2681	CB	SER	A	482	85.381	71.022	21.620	1.00	52.72	C
ATOM	2682	OG	SER	A	482	86.013	71.650	22.718	1.00	55.18	O
ATOM	2683	N	ILE	A	483	83.193	71.446	19.222	1.00	55.12	N
ATOM	2684	CA	ILE	A	483	82.391	70.791	18.194	1.00	56.51	C
ATOM	2685	C	ILE	A	483	82.101	71.737	17.026	1.00	56.96	C
ATOM	2686	O	ILE	A	483	82.516	71.404	15.895	1.00	58.03	O
ATOM	2687	CB	ILE	A	483	81.063	70.276	18.792	1.00	56.37	C
ATOM	2688	CG1	ILE	A	483	81.355	69.431	20.037	1.00	56.23	C
ATOM	2689	CG2	ILE	A	483	80.304	69.450	17.763	1.00	56.35	C
ATOM	2690	CD1	ILE	A	483	80.121	69.014	20.813	1.00	56.41	C
TER	2691		ILE	A	483						

TABLE 4

HETATM	2692	K	K A	900	94.574	53.191	29.387	0.75	33.20	K
HETATM	2693	P	XMP	602	68.081	55.369	14.890	1.00	29.26	P
HETATM	2694	O1P	XMP	602	67.684	55.295	13.481	1.00	30.18	O
HETATM	2695	O2P	XMP	602	68.902	54.234	15.354	1.00	31.70	O
HETATM	2696	O5'	XMP	602	66.787	55.392	15.717	1.00	28.83	O
HETATM	2697	O3P	XMP	602	68.651	56.672	15.275	1.00	30.39	O
HETATM	2698	C5'	XMP	602	65.796	54.347	15.863	1.00	26.57	C
HETATM	2699	C4'	XMP	602	64.756	54.593	16.960	1.00	26.90	C
HETATM	2700	O4'	XMP	602	63.943	55.732	16.688	1.00	27.02	O
HETATM	2701	C1'	XMP	602	62.618	55.681	17.180	1.00	27.81	C
HETATM	2702	N9	XMP	602	61.690	55.953	16.031	1.00	28.12	N
HETATM	2703	C4	XMP	602	61.248	57.183	15.601	1.00	28.78	C
HETATM	2704	N3	XMP	602	61.556	58.444	16.121	1.00	29.01	N
HETATM	2705	N1	XMP	602	60.086	59.258	14.353	1.00	29.05	N
HETATM	2706	C2	XMP	602	60.942	59.481	15.459	1.00	30.77	C
HETATM	2707	O2	XMP	602	61.128	60.639	15.829	1.00	31.42	O
HETATM	2708	C6	XMP	602	59.764	57.989	13.811	1.00	27.88	C
HETATM	2709	O6	XMP	602	59.015	57.875	12.853	1.00	28.97	O
HETATM	2710	C5	XMP	602	60.406	56.909	14.506	1.00	28.31	C
HETATM	2711	N7	XMP	602	60.325	55.573	14.268	1.00	27.77	N
HETATM	2712	C8	XMP	602	61.076	55.082	15.166	1.00	27.54	C
HETATM	2713	C2'	XMP	602	62.604	54.298	17.878	1.00	26.62	C
HETATM	2714	O2'	XMP	602	62.808	54.554	19.261	1.00	26.73	O
HETATM	2715	C3'	XMP	602	63.705	53.537	17.141	1.00	26.75	C
HETATM	2716	O3'	XMP	602	64.161	52.438	17.926	1.00	26.88	O
HETATM	2717	C1	MOA	600	60.161	58.910	19.598	1.00	39.69	C
HETATM	2718	C2	MOA	600	55.659	56.950	16.499	1.00	41.87	C
HETATM	2719	C3	MOA	600	54.526	56.264	16.209	1.00	42.80	C
HETATM	2720	C4	MOA	600	53.214	56.947	16.563	1.00	43.33	C
HETATM	2721	C5	MOA	600	52.615	56.311	17.824	1.00	44.46	C
HETATM	2722	C6	MOA	600	53.260	56.803	19.110	1.00	45.19	C
HETATM	2723	C7	MOA	600	59.586	54.022	20.007	1.00	38.55	C
HETATM	2724	C8	MOA	600	56.536	53.702	18.367	1.00	39.77	C
HETATM	2725	C9	MOA	600	54.498	54.877	15.549	1.00	42.56	C
HETATM	2726	C10	MOA	600	60.713	56.925	20.765	1.00	38.97	C
HETATM	2727	C11	MOA	600	59.765	56.576	19.638	1.00	38.97	C
HETATM	2728	C12	MOA	600	59.227	55.285	19.257	1.00	38.94	C
HETATM	2729	C13	MOA	600	58.328	55.252	18.116	1.00	38.60	C
HETATM	2730	C14	MOA	600	58.002	56.474	17.412	1.00	39.76	C
HETATM	2731	C15	MOA	600	58.558	57.736	17.831	1.00	39.72	C
HETATM	2732	C16	MOA	600	59.443	57.754	18.951	1.00	39.74	C
HETATM	2733	C17	MOA	600	57.066	56.441	16.206	1.00	41.19	C
HETATM	2734	O1	MOA	600	60.164	60.070	19.326	1.00	40.10	O
HETATM	2735	O2	MOA	600	60.857	58.377	20.607	1.00	39.52	O
HETATM	2736	O3	MOA	600	57.806	54.039	17.729	1.00	38.84	O
HETATM	2737	O4	MOA	600	58.226	58.894	17.131	1.00	41.40	O
HETATM	2738	O5	MOA	600	53.221	58.031	19.364	1.00	46.62	O
HETATM	2739	O6	MOA	600	53.815	55.961	19.854	1.00	44.12	O
HETATM	2740	O	HOH	1	61.376	37.927	37.348	1.00	48.46	O
HETATM	2741	O	HOH	2	66.118	60.676	24.768	1.00	20.39	O
HETATM	2742	O	HOH	3	57.906	58.970	28.360	1.00	26.84	O
HETATM	2743	O	HOH	4	66.772	48.007	38.757	1.00	25.49	O
HETATM	2744	O	HOH	5	87.612	55.755	31.226	1.00	23.33	O
HETATM	2745	O	HOH	6	79.992	42.156	29.537	1.00	21.25	O
HETATM	2746	O	HOH	7	59.636	45.401	36.922	1.00	29.33	O
HETATM	2747	O	HOH	8	71.079	54.650	21.993	1.00	25.95	O
HETATM	2748	O	HOH	9	75.154	45.933	32.815	1.00	29.51	O

TABLE 4

HETATM	2749	O	HOH	10	84.715	43.023	9.513	1.00	52.28	O
HETATM	2750	O	HOH	11	78.040	54.255	34.365	1.00	26.73	O
HETATM	2751	O	HOH	12	56.541	77.341	37.146	1.00	29.92	O
HETATM	2752	O	HOH	13	71.260	53.575	14.099	1.00	27.29	O
HETATM	2753	O	HOH	14	76.501	44.082	31.079	1.00	23.02	O
HETATM	2754	O	HOH	15	56.998	79.001	34.463	1.00	24.15	O
HETATM	2755	O	HOH	16	73.891	57.573	36.189	1.00	25.33	O
HETATM	2756	O	HOH	17	79.049	48.291	37.245	1.00	34.20	O
HETATM	2757	O	HOH	18	84.628	53.459	21.080	1.00	24.55	O
HETATM	2758	O	HOH	19	60.274	50.551	20.190	1.00	29.66	O
HETATM	2759	O	HOH	20	88.720	54.039	33.349	1.00	25.23	O
HETATM	2760	O	HOH	21	72.841	38.348	33.765	1.00	30.16	O
HETATM	2761	O	HOH	22	66.292	58.791	21.349	1.00	29.06	O
HETATM	2762	O	HOH	23	67.212	67.480	30.959	1.00	23.37	O
HETATM	2763	O	HOH	24	64.926	73.569	32.978	1.00	27.92	O
HETATM	2764	O	HOH	25	74.543	60.063	37.886	1.00	37.97	O
HETATM	2765	O	HOH	26	70.536	33.662	27.436	1.00	32.78	O
HETATM	2766	O	HOH	27	49.672	44.473	20.960	1.00	32.61	O
HETATM	2767	O	HOH	28	82.525	67.407	31.912	1.00	36.84	O
HETATM	2768	O	HOH	29	62.576	38.739	33.869	1.00	27.93	O
HETATM	2769	O	HOH	30	65.657	36.916	34.650	1.00	31.90	O
HETATM	2770	O	HOH	31	77.268	36.846	6.578	1.00	54.28	O
HETATM	2771	O	HOH	32	53.069	53.133	19.199	1.00	50.49	O
HETATM	2772	O	HOH	33	76.732	41.427	32.285	1.00	26.63	O
HETATM	2773	O	HOH	34	59.082	42.334	5.797	1.00	52.93	O
HETATM	2774	O	HOH	35	75.506	39.010	8.246	1.00	30.82	O
HETATM	2775	O	HOH	36	69.343	68.054	32.924	1.00	32.47	O
HETATM	2776	O	HOH	37	64.457	56.749	20.210	1.00	32.67	O
HETATM	2777	O	HOH	38	62.747	61.776	37.438	1.00	35.12	O
HETATM	2778	O	HOH	39	73.816	64.979	30.707	1.00	34.05	O
HETATM	2779	O	HOH	40	64.885	41.594	7.798	1.00	30.67	O
HETATM	2780	O	HOH	41	87.291	69.760	24.178	1.00	33.68	O
HETATM	2781	O	HOH	42	63.521	39.537	6.109	1.00	44.37	O
HETATM	2782	O	HOH	43	65.271	63.920	35.809	1.00	34.06	O
HETATM	2783	O	HOH	44	56.965	57.545	38.806	1.00	37.58	O
HETATM	2784	O	HOH	45	79.547	40.499	32.022	1.00	37.32	O
HETATM	2785	O	HOH	46	60.019	51.355	9.831	1.00	30.80	O
HETATM	2786	O	HOH	47	61.960	50.701	17.845	1.00	28.12	O
HETATM	2787	O	HOH	48	74.307	50.935	36.302	1.00	32.12	O
HETATM	2788	O	HOH	49	48.640	54.380	36.947	1.00	38.70	O
HETATM	2789	O	HOH	50	53.284	51.835	37.998	1.00	35.47	O
HETATM	2790	O	HOH	51	51.464	58.781	25.814	1.00	42.15	O
HETATM	2791	O	HOH	52	66.312	31.378	26.604	1.00	42.30	O
HETATM	2792	O	HOH	53	51.114	46.450	35.768	1.00	39.78	O
HETATM	2793	O	HOH	54	72.161	53.847	44.046	1.00	49.25	O
HETATM	2794	O	HOH	55	68.174	38.435	46.467	1.00	39.10	O
HETATM	2795	O	HOH	56	62.329	64.325	35.245	1.00	31.82	O
HETATM	2796	O	HOH	57	56.533	41.432	37.289	1.00	42.75	O
HETATM	2797	O	HOH	58	60.631	39.846	6.689	1.00	42.47	O
HETATM	2798	O	HOH	59	54.566	73.818	39.035	1.00	35.31	O
HETATM	2799	O	HOH	60	60.006	59.911	30.562	1.00	39.12	O
HETATM	2800	O	HOH	61	93.037	49.413	23.367	1.00	39.58	O
HETATM	2801	O	HOH	62	78.413	51.159	38.006	1.00	44.41	O
HETATM	2802	O	HOH	63	66.743	37.946	16.658	1.00	31.22	O
HETATM	2803	O	HOH	64	61.454	73.868	39.323	1.00	45.74	O
HETATM	2804	O	HOH	65	52.424	53.998	25.927	1.00	36.17	O
HETATM	2805	O	HOH	66	59.056	45.472	5.839	1.00	44.80	O

TABLE 4

HETATM	2806	O	HOH	67	71.714	56.136	41.913	1.00	33.23	O
HETATM	2807	O	HOH	68	92.961	54.326	36.232	1.00	47.69	O
HETATM	2808	O	HOH	69	82.193	63.483	21.263	1.00	31.53	O
HETATM	2809	O	HOH	70	80.771	49.496	10.878	1.00	59.85	O
HETATM	2810	O	HOH	71	50.884	32.054	16.328	1.00	46.83	O
HETATM	2811	O	HOH	72	43.572	44.049	23.478	1.00	40.54	O
HETATM	2812	O	HOH	73	79.532	38.613	17.574	1.00	40.24	O
HETATM	2813	O	HOH	74	94.403	49.046	26.001	1.00	45.47	O
HETATM	2814	O	HOH	75	59.694	51.808	16.401	1.00	31.05	O
HETATM	2815	O	HOH	76	72.250	67.511	32.157	1.00	37.70	O
HETATM	2816	O	HOH	77	62.657	53.868	-3.472	1.00	54.27	O
HETATM	2817	O	HOH	78	51.622	50.791	21.993	1.00	42.86	O
HETATM	2818	O	HOH	79	92.002	50.835	35.387	1.00	48.05	O
HETATM	2819	O	HOH	80	59.267	38.498	34.638	1.00	33.40	O
HETATM	2820	O	HOH	81	90.144	53.498	35.941	1.00	39.87	O
HETATM	2821	O	HOH	82	78.700	70.970	25.462	1.00	45.50	O
HETATM	2822	O	HOH	83	75.528	70.617	31.893	1.00	36.82	O
HETATM	2823	O	HOH	84	58.864	51.527	22.923	1.00	41.16	O
HETATM	2824	O	HOH	85	85.509	49.375	39.516	1.00	46.27	O
HETATM	2825	O	HOH	86	75.401	39.056	31.150	1.00	35.14	O
HETATM	2826	O	HOH	87	75.010	37.307	10.676	1.00	38.37	O
HETATM	2827	O	HOH	88	91.471	42.227	35.142	1.00	46.93	O
HETATM	2828	O	HOH	89	49.032	57.262	26.680	1.00	45.04	O
HETATM	2829	O	HOH	90	58.819	35.855	26.787	1.00	33.51	O
HETATM	2830	O	HOH	91	66.610	35.147	36.987	1.00	41.70	O
HETATM	2831	O	HOH	92	66.423	29.073	14.771	1.00	36.38	O
HETATM	2832	O	HOH	93	50.205	43.386	7.840	1.00	48.37	O
HETATM	2833	O	HOH	94	69.770	36.084	7.610	1.00	43.71	O
HETATM	2834	O	HOH	95	56.434	31.334	8.824	1.00	51.14	O
HETATM	2835	O	HOH	96	68.525	59.191	7.595	1.00	57.38	O
HETATM	2836	O	HOH	97	68.856	74.797	33.274	1.00	45.02	O
HETATM	2837	O	HOH	98	45.466	44.918	32.864	1.00	44.79	O
HETATM	2838	O	HOH	99	73.439	40.590	41.918	1.00	43.45	O
HETATM	2839	O	HOH	100	82.331	76.466	24.096	1.00	49.31	O
HETATM	2840	O	HOH	101	63.989	58.544	43.317	1.00	49.06	O
HETATM	2841	O	HOH	102	52.822	30.334	14.629	1.00	50.72	O
HETATM	2842	O	HOH	103	69.162	44.078	0.587	1.00	44.93	O
HETATM	2843	O	HOH	104	57.966	65.984	38.109	1.00	50.45	O
HETATM	2844	O	HOH	105	61.009	30.223	22.762	1.00	54.86	O
HETATM	2845	O	HOH	106	92.696	40.912	20.325	1.00	51.59	O
HETATM	2846	O	HOH	107	83.364	55.951	16.129	1.00	38.90	O
HETATM	2847	O	HOH	108	80.747	50.654	40.836	1.00	49.94	O
HETATM	2848	O	HOH	109	55.067	32.734	36.953	1.00	52.02	O
HETATM	2849	O	HOH	110	61.338	24.112	16.927	1.00	75.61	O
HETATM	2850	O	HOH	111	55.363	51.236	15.584	1.00	50.23	O
HETATM	2851	O	HOH	112	86.105	39.380	22.608	1.00	43.92	O
HETATM	2852	O	HOH	113	65.590	61.745	38.398	1.00	44.21	O
HETATM	2853	O	HOH	114	76.005	54.691	-0.953	1.00	60.80	O
HETATM	2854	O	HOH	115	63.472	78.599	34.826	1.00	49.03	O
HETATM	2855	O	HOH	116	56.584	48.288	14.849	1.00	40.92	O
HETATM	2856	O	HOH	117	74.848	29.487	24.069	1.00	48.29	O
HETATM	2857	O	HOH	118	60.786	51.033	45.907	1.00	58.58	O
HETATM	2858	O	HOH	119	63.463	59.191	18.549	1.00	40.51	O
HETATM	2859	O	HOH	120	64.003	26.220	24.484	1.00	50.15	O
HETATM	2860	O	HOH	121	58.655	37.671	5.381	1.00	53.24	O
HETATM	2861	O	HOH	122	63.615	31.933	25.497	1.00	40.97	O
HETATM	2862	O	HOH	123	65.616	76.381	33.672	1.00	46.89	O



TABLE 4

HETATM	2863	O	HOH	124	55.158	44.415	39.591	1.00	56.77	O
HETATM	2864	O	HOH	125	75.132	48.039	35.838	1.00	43.66	O
HETATM	2865	O	HOH	126	65.816	28.316	26.676	1.00	42.04	O
HETATM	2866	O	HOH	127	54.208	52.470	12.608	1.00	47.30	O
HETATM	2867	O	HOH	128	53.242	30.460	11.276	1.00	68.84	O
HETATM	2868	O	HOH	129	60.726	33.090	34.181	1.00	47.71	O
HETATM	2869	O	HOH	130	64.010	40.397	3.202	1.00	52.21	O
HETATM	2870	O	HOH	131	77.504	52.228	0.017	1.00	50.80	O
HETATM	2871	O	HOH	132	69.804	61.883	38.293	1.00	46.95	O
HETATM	2872	O	HOH	133	45.792	41.736	13.068	1.00	47.40	O
HETATM	2873	O	HOH	134	50.939	33.262	11.744	1.00	43.38	O
HETATM	2874	O	HOH	135	76.312	35.442	27.267	1.00	53.79	O
HETATM	2875	O	HOH	136	62.510	56.249	46.266	1.00	55.19	O
HETATM	2876	O	HOH	137	73.706	35.590	8.247	1.00	48.59	O
HETATM	2877	O	HOH	138	66.547	78.277	31.624	1.00	74.03	O
HETATM	2878	O	HOH	139	64.392	81.457	33.669	1.00	49.54	O
HETATM	2879	O	HOH	140	61.558	64.657	38.228	1.00	56.05	O
HETATM	2880	O	HOH	141	96.215	46.485	27.601	1.00	49.93	O
HETATM	2881	O	HOH	142	61.787	33.565	27.109	1.00	49.84	O
HETATM	2882	O	HOH	143	52.202	49.654	40.025	1.00	57.52	O
HETATM	2883	O	HOH	144	65.216	31.604	29.511	1.00	59.80	O
HETATM	2884	O	HOH	145	69.153	31.657	25.777	1.00	57.79	O
HETATM	2885	O	HOH	146	60.092	41.511	39.950	1.00	50.45	O
HETATM	2886	O	HOH	147	74.800	33.112	28.850	1.00	67.42	O
HETATM	2887	O	HOH	148	62.654	33.516	30.073	1.00	62.16	O
HETATM	2888	O	HOH	149	71.897	32.924	29.976	1.00	50.48	O
HETATM	2889	O	HOH	150	56.804	34.357	25.133	1.00	46.97	O
HETATM	2890	O	HOH	151	73.224	33.332	26.044	1.00	49.98	O
HETATM	2891	O	HOH	152	62.549	28.935	25.883	1.00	63.89	O
HETATM	2892	O	HOH	153	72.526	31.533	23.597	1.00	46.02	O
HETATM	2893	O	HOH	154	55.400	54.063	40.193	1.00	51.55	O
HETATM	2894	O	HOH	155	56.260	50.851	2.415	1.00	59.29	O
HETATM	2895	O	HOH	156	59.029	24.830	22.198	1.00	60.82	O
HETATM	2896	O	HOH	157	65.228	26.246	14.456	1.00	42.42	O
HETATM	2897	O	HOH	158	74.086	29.603	13.669	1.00	44.88	O
HETATM	2898	O	HOH	159	71.012	57.900	14.425	1.00	49.16	O
HETATM	2899	O	HOH	160	76.443	52.766	36.176	1.00	32.86	O
HETATM	2900	O	HOH	161	74.501	55.579	38.525	1.00	43.80	O
HETATM	2901	O	HOH	162	68.390	53.333	47.198	1.00	57.30	O
HETATM	2902	O	HOH	163	66.068	54.957	48.273	1.00	52.03	O
HETATM	2903	O	HOH	164	90.274	44.981	34.515	1.00	42.74	O
HETATM	2904	O	HOH	165	92.357	46.800	32.648	1.00	50.13	O
HETATM	2905	O	HOH	166	87.411	55.494	37.249	1.00	49.75	O
HETATM	2906	O	HOH	167	65.234	66.995	39.283	1.00	56.66	O
HETATM	2907	O	HOH	168	75.023	62.880	19.374	1.00	43.60	O
HETATM	2908	O	HOH	169	49.785	54.078	24.384	1.00	56.06	O
HETATM	2909	O	HOH	170	93.198	47.611	19.693	1.00	57.65	O
HETATM	2910	O	HOH	171	69.700	45.410	46.557	1.00	42.35	O
HETATM	2911	O	HOH	172	66.820	41.422	2.567	1.00	50.29	O
HETATM	2912	O	HOH	173	87.119	47.913	13.662	1.00	52.23	O
HETATM	2913	O	HOH	174	72.571	61.611	21.232	1.00	34.11	O
HETATM	2914	O	HOH	175	81.561	38.698	24.061	1.00	46.29	O
HETATM	2915	O	HOH	176	70.615	32.679	38.298	1.00	45.72	O
HETATM	2916	O	HOH	177	53.945	58.607	38.141	1.00	50.80	O
HETATM	2917	O	HOH	178	69.562	62.885	21.604	1.00	28.51	O
HETATM	2918	O	HOH	179	69.716	68.855	36.042	1.00	48.11	O
HETATM	2919	O	HOH	180	67.633	69.270	38.272	1.00	45.15	O

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CONNECT 2739 2722
MASTER      550      0      3     14     18      0      0      6 2918      1     49     39
END
Figure 13
P-UC 5440
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HEADER      OXIDOREDUCTASE                      08-AUG-02    1MEW
TITLE       INOSINE MONOPHOSPHATE DEHYDROGENASE (IMPDH) FROM
TITLE       2 TRITRICHOMONAS FOETUS WITH XMP AND NAD BOUND
COMPND      MOL_ID: 1;
COMPND      2 MOLECULE: INOSINE-5'-MONOPHOSPHATE DEHYDROGENASE;
COMPND      3 CHAIN: A;
COMPND      4 SYNONYM: IMP DEHYDROGENASE, IMPDH;
COMPND      5 EC: 1.1.1.205;
COMPND      6 ENGINEERED: YES
SOURCE      MOL_ID: 1;
SOURCE      2 ORGANISM_SCIENTIFIC: TRITRICHOMONAS FOETUS;
SOURCE      3 GENE: IMPDH;
SOURCE      4 EXPRESSION_SYSTEM: ESCHERICHIA COLI;
SOURCE      5 EXPRESSION_SYSTEM_COMMON: BACTERIA;
SOURCE      6 EXPRESSION_SYSTEM_STRAIN: H712;
SOURCE      7 EXPRESSION_SYSTEM_VECTOR_TYPE: PLASMID;
SOURCE      8 EXPRESSION_SYSTEM_PLASMID: PBACE
KEYWDS      ALPHA BETA BARREL
EXPDTA      X-RAY DIFFRACTION
AUTHOR      G.L.PROSISE,H.LUECKE
JRNL        AUTH    G.L.PROSISE,H.LUECKE
JRNL        TITL    CRYSTAL STRUCTURE OF T. FOETUS INOSINE
JRNL        TITL 2  MONOPHOSPHATE DEHYDROGENASE IN COMPLEX WITH
JRNL        TITL 3  SUBSTRATE, COFACTOR, AND ANALOGS:STRUCTURAL BASIS
JRNL        TITL 4  FOR THE RANDOM-IN ORDERED-OUT KINETIC MECHANISM
JRNL        REF     TO BE PUBLISHED
JRNL        REFN
REMARK      1
REMARK      2
REMARK      2 RESOLUTION. 2.15 ANGSTROMS.
REMARK      3
REMARK      3 REFINEMENT.
REMARK      3   PROGRAM       : CNS 1.1
REMARK      3   AUTHORS        : BRUNGER,ADAMS,CLORE,DELANO,GROS,GROSSE-
REMARK      3                   : KUNSTLEVE,JIANG,KUSZEWSKI,NILGES, PANNU,
REMARK      3                   : READ,RICE,SIMONSON,WARREN
REMARK      3
REMARK      3 REFINEMENT TARGET : ENGH & HUBER
REMARK      3
REMARK      3 DATA USED IN REFINEMENT.
REMARK      3   RESOLUTION RANGE HIGH (ANGSTROMS) : 2.15
REMARK      3   RESOLUTION RANGE LOW  (ANGSTROMS) : 29.61
REMARK      3   DATA CUTOFF                    (SIGMA(F)) : 0.000
REMARK      3   OUTLIER CUTOFF HIGH (RMS(ABS(F))) : NULL
REMARK      3   COMPLETENESS (WORKING+TEST) (%) : 98.3
REMARK      3   NUMBER OF REFLECTIONS              : 33857
REMARK      3
REMARK      3 FIT TO DATA USED IN REFINEMENT.
REMARK      3   CROSS-VALIDATION METHOD              : THROUGHOUT
REMARK      3   FREE R VALUE TEST SET SELECTION      : RANDOM
REMARK      3   R VALUE                            (WORKING SET) : 0.224
REMARK      3   FREE R VALUE                          : 0.246
REMARK      3   FREE R VALUE TEST SET SIZE (%)       : 5.200
REMARK      3   FREE R VALUE TEST SET COUNT          : 1768
REMARK      3   ESTIMATED ERROR OF FREE R VALUE      : 0.006
REMARK      3
REMARK      3 FIT IN THE HIGHEST RESOLUTION BIN.

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REMARK 3 TOTAL NUMBER OF BINS USED : 6
REMARK 3 BIN RESOLUTION RANGE HIGH (A) : 2.15
REMARK 3 BIN RESOLUTION RANGE LOW (A) : 2.28
REMARK 3 BIN COMPLETENESS (WORKING+TEST) (%) : 95.80
REMARK 3 REFLECTIONS IN BIN (WORKING SET) : 5092
REMARK 3 BIN R VALUE (WORKING SET) : 0.2580
REMARK 3 BIN FREE R VALUE : 0.2840
REMARK 3 BIN FREE R VALUE TEST SET SIZE (%) : 5.00
REMARK 3 BIN FREE R VALUE TEST SET COUNT : 270
REMARK 3 ESTIMATED ERROR OF BIN FREE R VALUE : 0.017
REMARK 3
REMARK 3 NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK 3 PROTEIN ATOMS : 2635
REMARK 3 NUCLEIC ACID ATOMS : 0
REMARK 3 HETEROGEN ATOMS : 69
REMARK 3 SOLVENT ATOMS : 164
REMARK 3
REMARK 3 B VALUES.
REMARK 3 FROM WILSON PLOT (A**2) : 28.80
REMARK 3 MEAN B VALUE (OVERALL, A**2) : 36.10
REMARK 3 OVERALL ANISOTROPIC B VALUE.
REMARK 3 B11 (A**2) : 0.00000
REMARK 3 B22 (A**2) : 0.00000
REMARK 3 B33 (A**2) : 0.00000
REMARK 3 B12 (A**2) : 0.00000
REMARK 3 B13 (A**2) : 0.00000
REMARK 3 B23 (A**2) : 0.00000
REMARK 3
REMARK 3 ESTIMATED COORDINATE ERROR.
REMARK 3 ESD FROM LUZZATI PLOT (A) : 0.26
REMARK 3 ESD FROM SIGMAA (A) : 0.22
REMARK 3 LOW RESOLUTION CUTOFF (A) : 5.00
REMARK 3
REMARK 3 CROSS-VALIDATED ESTIMATED COORDINATE ERROR.
REMARK 3 ESD FROM C-V LUZZATI PLOT (A) : 0.30
REMARK 3 ESD FROM C-V SIGMAA (A) : 0.28
REMARK 3
REMARK 3 RMS DEVIATIONS FROM IDEAL VALUES.
REMARK 3 BOND LENGTHS (A) : 0.006
REMARK 3 BOND ANGLES (DEGREES) : 1.20
REMARK 3 DIHEDRAL ANGLES (DEGREES) : 22.90
REMARK 3 IMPROPER ANGLES (DEGREES) : 0.77
REMARK 3
REMARK 3 ISOTROPIC THERMAL MODEL : RESTRAINED
REMARK 3
REMARK 3 ISOTROPIC THERMAL FACTOR RESTRAINTS. RMS SIGMA
REMARK 3 MAIN-CHAIN BOND (A**2) : 0.780 ; 1.500
REMARK 3 MAIN-CHAIN ANGLE (A**2) : 1.410 ; 2.000
REMARK 3 SIDE-CHAIN BOND (A**2) : 0.900 ; 2.000
REMARK 3 SIDE-CHAIN ANGLE (A**2) : 1.480 ; 2.500
REMARK 3
REMARK 3 BULK SOLVENT MODELING.
REMARK 3 METHOD USED : FLAT MODEL
REMARK 3 KSOL : 0.38
REMARK 3 BSOL : 41.94
REMARK 3
REMARK 3 NCS MODEL : NULL

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REMARK 3
REMARK 3 NCS RESTRAINTS. RMS SIGMA/WEIGHT
REMARK 3 GROUP 1 POSITIONAL (A) : NULL ; NULL
REMARK 3 GROUP 1 B-FACTOR (A**2) : NULL ; NULL
REMARK 3
REMARK 3 PARAMETER FILE 1 : PROTEIN_REP.PARAM
REMARK 3 PARAMETER FILE 2 : PARAM.GNSOL
REMARK 3 PARAMETER FILE 3 : CIS_PEPTIDE.PARAM
REMARK 3 PARAMETER FILE 4 : XMPG.PAR
REMARK 3 PARAMETER FILE 5 : NAD_PROD.PAR
REMARK 3 PARAMETER FILE 6 : NULL
REMARK 3 TOPOLOGY FILE 1 : PROTEIN.TOP
REMARK 3 TOPOLOGY FILE 2 : XMPG.TOP
REMARK 3 TOPOLOGY FILE 3 : NAD_PROD.TOP
REMARK 3 TOPOLOGY FILE 4 : ION.TOP
REMARK 3 TOPOLOGY FILE 5 : TOPH.GNSOL
REMARK 3 TOPOLOGY FILE 6 : NULL
REMARK 3
REMARK 3 OTHER REFINEMENT REMARKS: NULL
REMARK 4
REMARK 4 1MEW COMPLIES WITH FORMAT V. 2.3, 09-JULY-1998
REMARK 100
REMARK 100 THIS ENTRY HAS BEEN PROCESSED BY RCSB ON 16-AUG-2002.
REMARK 100 THE RCSB ID CODE IS RCSB016859.
REMARK 200
REMARK 200 EXPERIMENTAL DETAILS
REMARK 200 EXPERIMENT TYPE : X-RAY DIFFRACTION
REMARK 200 DATE OF DATA COLLECTION : 01-NOV-2000
REMARK 200 TEMPERATURE (KELVIN) : 100.0
REMARK 200 PH : 7.50
REMARK 200 NUMBER OF CRYSTALS USED : 1
REMARK 200
REMARK 200 SYNCHROTRON (Y/N) : Y
REMARK 200 RADIATION SOURCE : ALS
REMARK 200 BEAMLINE : 5.0.2
REMARK 200 X-RAY GENERATOR MODEL : NULL
REMARK 200 MONOCHROMATIC OR LAUE (M/L) : M
REMARK 200 WAVELENGTH OR RANGE (A) : 1.00
REMARK 200 MONOCHROMATOR : NULL
REMARK 200 OPTICS : NULL
REMARK 200
REMARK 200 DETECTOR TYPE : CCD
REMARK 200 DETECTOR MANUFACTURER : ADSC QUANTUM 4
REMARK 200 INTENSITY-INTEGRATION SOFTWARE : DENZO
REMARK 200 DATA SCALING SOFTWARE : SCALEPACK
REMARK 200
REMARK 200 NUMBER OF UNIQUE REFLECTIONS : 33857
REMARK 200 RESOLUTION RANGE HIGH (A) : 2.150
REMARK 200 RESOLUTION RANGE LOW (A) : 50.000
REMARK 200 REJECTION CRITERIA (SIGMA(I)) : 0.000
REMARK 200
REMARK 200 OVERALL.
REMARK 200 COMPLETENESS FOR RANGE (%) : 98.4
REMARK 200 DATA REDUNDANCY : 5.400
REMARK 200 R MERGE (I) : 0.08000
REMARK 200 R SYM (I) : NULL
REMARK 200 <I/SIGMA(I)> FOR THE DATA SET : 19.0000

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REMARK 200  
 REMARK 200 IN THE HIGHEST RESOLUTION SHELL.  
 REMARK 200 HIGHEST RESOLUTION SHELL, RANGE HIGH (A) : 2.15  
 REMARK 200 HIGHEST RESOLUTION SHELL, RANGE LOW (A) : 2.19  
 REMARK 200 COMPLETENESS FOR SHELL (%) : 95.9  
 REMARK 200 DATA REDUNDANCY IN SHELL : NULL  
 REMARK 200 R MERGE FOR SHELL (I) : 0.58000  
 REMARK 200 R SYM FOR SHELL (I) : NULL  
 REMARK 200 <I/SIGMA(I)> FOR SHELL : 2.200  
 REMARK 200  
 REMARK 200 DIFFRACTION PROTOCOL: SINGLE WAVELENGTH  
 REMARK 200 METHOD USED TO DETERMINE THE STRUCTURE: FOURIER SYNTHESIS  
 REMARK 200 SOFTWARE USED: CNS  
 REMARK 200 STARTING MODEL: PDB ENTRY 1AK5  
 REMARK 200  
 REMARK 200 REMARK: NULL  
 REMARK 280  
 REMARK 280 CRYSTAL  
 REMARK 280 SOLVENT CONTENT, VS (%) : NULL  
 REMARK 280 MATTHEWS COEFFICIENT, VM (ANGSTROMS\*\*3/DA) : NULL  
 REMARK 280  
 REMARK 280 CRYSTALLIZATION CONDITIONS: SODIUM MALONATE, TRIS, 2-  
 REMARK 280 MERCAPTOETHANOL, EDTA, GLYCEROL  
 REMARK 290  
 REMARK 290 CRYSTALLOGRAPHIC SYMMETRY  
 REMARK 290 SYMMETRY OPERATORS FOR SPACE GROUP: P 4 3 2  
 REMARK 290  

SYNOPSIS	SYMMETRY
NNNMMM	OPERATOR
1555	X, Y, Z
2555	-X, -Y, Z
3555	-X, Y, -Z
4555	X, -Y, -Z
5555	Z, X, Y
6555	Z, -X, -Y
7555	-Z, -X, Y
8555	-Z, X, -Y
9555	Y, Z, X
10555	-Y, Z, -X
11555	Y, -Z, -X
12555	-Y, -Z, X
13555	Y, X, -Z
14555	-Y, -X, -Z
15555	Y, -X, Z
16555	-Y, X, Z
17555	X, Z, -Y
18555	-X, Z, Y
19555	-X, -Z, -Y
20555	X, -Z, Y
21555	Z, Y, -X
22555	Z, -Y, X
23555	-Z, Y, X
24555	-Z, -Y, -X

 REMARK 290  
 REMARK 290 WHERE NNN -> OPERATOR NUMBER  
 REMARK 290 MMM -> TRANSLATION VECTOR  
 REMARK 290

REMARK 290 CRYSTALLOGRAPHIC SYMMETRY TRANSFORMATIONS  
REMARK 290 THE FOLLOWING TRANSFORMATIONS OPERATE ON THE ATOM/HETATM  
REMARK 290 RECORDS IN THIS ENTRY TO PRODUCE CRYSTALLOGRAPHICALLY  
REMARK 290 RELATED MOLECULES.

REMARK 290	SMTRY1	1	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	1	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY3	1	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	2	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	2	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY3	2	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	3	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	3	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY3	3	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	4	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	4	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY3	4	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	5	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY2	5	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	5	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY1	6	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY2	6	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	6	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	7	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY2	7	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	7	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY1	8	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY2	8	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	8	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	9	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	9	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	9	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	10	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	10	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	10	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	11	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	11	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY3	11	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	12	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	12	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY3	12	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	13	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	13	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	13	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	14	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	14	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	14	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	15	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	15	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	15	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	16	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	16	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	16	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	17	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	17	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	17	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	18	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	18	0.000000	0.000000	1.000000	0.000000

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REMARK 290  SMTRY3  18  0.000000  1.000000  0.000000  0.000000
REMARK 290  SMTRY1  19 -1.000000  0.000000  0.000000  0.000000
REMARK 290  SMTRY2  19  0.000000  0.000000 -1.000000  0.000000
REMARK 290  SMTRY3  19  0.000000 -1.000000  0.000000  0.000000
REMARK 290  SMTRY1  20  1.000000  0.000000  0.000000  0.000000
REMARK 290  SMTRY2  20  0.000000  0.000000 -1.000000  0.000000
REMARK 290  SMTRY3  20  0.000000  1.000000  0.000000  0.000000
REMARK 290  SMTRY1  21  0.000000  0.000000  1.000000  0.000000
REMARK 290  SMTRY2  21  0.000000  1.000000  0.000000  0.000000
REMARK 290  SMTRY3  21 -1.000000  0.000000  0.000000  0.000000
REMARK 290  SMTRY1  22  0.000000  0.000000  1.000000  0.000000
REMARK 290  SMTRY2  22  0.000000 -1.000000  0.000000  0.000000
REMARK 290  SMTRY3  22  1.000000  0.000000  0.000000  0.000000
REMARK 290  SMTRY1  23  0.000000  0.000000 -1.000000  0.000000
REMARK 290  SMTRY2  23  0.000000  1.000000  0.000000  0.000000
REMARK 290  SMTRY3  23  1.000000  0.000000  0.000000  0.000000
REMARK 290  SMTRY1  24  0.000000  0.000000 -1.000000  0.000000
REMARK 290  SMTRY2  24  0.000000 -1.000000  0.000000  0.000000
REMARK 290  SMTRY3  24 -1.000000  0.000000  0.000000  0.000000
REMARK 290
REMARK 290 REMARK: NULL
REMARK 300
REMARK 300 BIOMOLECULE: 1
REMARK 300 THIS ENTRY CONTAINS THE CRYSTALLOGRAPHIC ASYMMETRIC UNIT
REMARK 300 WHICH CONSISTS OF 1 CHAIN(S). SEE REMARK 350 FOR
REMARK 300 INFORMATION ON GENERATING THE BIOLOGICAL MOLECULE(S).
REMARK 350
REMARK 350 GENERATING THE BIOMOLECULE
REMARK 350 COORDINATES FOR A COMPLETE MULTIMER REPRESENTING THE KNOWN
REMARK 350 BIOLOGICALLY SIGNIFICANT OLIGOMERIZATION STATE OF THE
REMARK 350 MOLECULE CAN BE GENERATED BY APPLYING BIOMT TRANSFORMATIONS
REMARK 350 GIVEN BELOW. BOTH NON-CRYSTALLOGRAPHIC AND
REMARK 350 CRYSTALLOGRAPHIC OPERATIONS ARE GIVEN.
REMARK 350
REMARK 350 BIOMOLECULE: 1
REMARK 350 APPLY THE FOLLOWING TO CHAINS: A
REMARK 350  BIOMT1   1  1.000000  0.000000  0.000000  0.000000
REMARK 350  BIOMT2   1  0.000000  1.000000  0.000000  0.000000
REMARK 350  BIOMT3   1  0.000000  0.000000  1.000000  0.000000
REMARK 350  BIOMT1   2 -1.000000  0.000000  0.000000  153.82700
REMARK 350  BIOMT2   2  0.000000 -1.000000  0.000000  153.82700
REMARK 350  BIOMT3   2  0.000000  0.000000  1.000000  0.000000
REMARK 350  BIOMT1   3  0.000000  1.000000  0.000000  0.000000
REMARK 350  BIOMT2   3 -1.000000  0.000000  0.000000  153.82700
REMARK 350  BIOMT3   3  0.000000  0.000000  1.000000  0.000000
REMARK 350  BIOMT1   4  0.000000 -1.000000  0.000000  153.82700
REMARK 350  BIOMT2   4  1.000000  0.000000  0.000000  0.000000
REMARK 350  BIOMT3   4  0.000000  0.000000  1.000000  0.000000
REMARK 465
REMARK 465 MISSING RESIDUES
REMARK 465 THE FOLLOWING RESIDUES WERE NOT LOCATED IN THE
REMARK 465 EXPERIMENT. (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 465 IDENTIFIER; SSSEQ=SEQUENCE NUMBER; I=INSERTION CODE.)
REMARK 465
REMARK 465  M RES C SSSEQI
REMARK 465    MET A      1
REMARK 465    GLY A    102

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REMARK 465	PHE A	103
REMARK 465	VAL A	104
REMARK 465	VAL A	105
REMARK 465	SER A	106
REMARK 465	ASP A	107
REMARK 465	SER A	108
REMARK 465	ASN A	109
REMARK 465	VAL A	110
REMARK 465	LYS A	111
REMARK 465	PRO A	112
REMARK 465	ASP A	113
REMARK 465	GLN A	114
REMARK 465	THR A	115
REMARK 465	PHE A	116
REMARK 465	ALA A	117
REMARK 465	ASP A	118
REMARK 465	VAL A	119
REMARK 465	LEU A	120
REMARK 465	ALA A	121
REMARK 465	ILE A	122
REMARK 465	SER A	123
REMARK 465	GLN A	124
REMARK 465	ARG A	125
REMARK 465	THR A	126
REMARK 465	THR A	127
REMARK 465	HIS A	128
REMARK 465	ASN A	129
REMARK 465	THR A	130
REMARK 465	VAL A	131
REMARK 465	ALA A	132
REMARK 465	VAL A	133
REMARK 465	THR A	134
REMARK 465	ASP A	135
REMARK 465	ASP A	136
REMARK 465	GLY A	137
REMARK 465	THR A	138
REMARK 465	PRO A	139
REMARK 465	HIS A	140
REMARK 465	GLY A	141
REMARK 465	VAL A	142
REMARK 465	LEU A	143
REMARK 465	LEU A	144
REMARK 465	GLY A	145
REMARK 465	LEU A	146
REMARK 465	VAL A	147
REMARK 465	THR A	148
REMARK 465	GLN A	149
REMARK 465	ARG A	150
REMARK 465	ASP A	151
REMARK 465	TYR A	152
REMARK 465	PRO A	153
REMARK 465	ILE A	154
REMARK 465	ASP A	155
REMARK 465	LEU A	156
REMARK 465	THR A	157
REMARK 465	GLN A	158
REMARK 465	THR A	159

REMARK 465	GLU A	160
REMARK 465	THR A	161
REMARK 465	LYS A	162
REMARK 465	VAL A	163
REMARK 465	SER A	164
REMARK 465	ASP A	165
REMARK 465	MET A	166
REMARK 465	MET A	167
REMARK 465	THR A	168
REMARK 465	PRO A	169
REMARK 465	PHE A	170
REMARK 465	SER A	171
REMARK 465	LYS A	172
REMARK 465	LEU A	173
REMARK 465	VAL A	174
REMARK 465	THR A	175
REMARK 465	ALA A	176
REMARK 465	HIS A	177
REMARK 465	GLN A	178
REMARK 465	ASP A	179
REMARK 465	THR A	180
REMARK 465	LYS A	181
REMARK 465	LEU A	182
REMARK 465	SER A	183
REMARK 465	GLU A	184
REMARK 465	ALA A	185
REMARK 465	ASN A	186
REMARK 465	LYS A	187
REMARK 465	ILE A	188
REMARK 465	ILE A	189
REMARK 465	TRP A	190
REMARK 465	GLU A	191
REMARK 465	LYS A	192
REMARK 465	LYS A	193
REMARK 465	LEU A	194
REMARK 465	ASN A	195
REMARK 465	ALA A	196
REMARK 465	LEU A	197
REMARK 465	PRO A	198
REMARK 465	ILE A	199
REMARK 465	ILE A	200
REMARK 465	ASP A	201
REMARK 465	ASP A	202
REMARK 465	ASP A	203
REMARK 465	GLN A	204
REMARK 465	HIS A	205
REMARK 465	LEU A	206
REMARK 465	ARG A	207
REMARK 465	TYR A	208
REMARK 465	ILE A	209
REMARK 465	VAL A	210
REMARK 465	PHE A	211
REMARK 465	ARG A	212
REMARK 465	LYS A	213
REMARK 465	ASP A	214
REMARK 465	TYR A	215
REMARK 465	ASP A	216

REMARK 465	ARG A	217
REMARK 465	SER A	218
REMARK 465	GLN A	219
REMARK 465	VAL A	220
REMARK 465	CYS A	221
REMARK 465	ILE A	318
REMARK 465	CYS A	319
REMARK 465	ILE A	320
REMARK 465	THR A	321
REMARK 465	GLN A	417
REMARK 465	ARG A	418
REMARK 465	TYR A	419
REMARK 465	ASP A	420
REMARK 465	LEU A	421
REMARK 465	GLY A	422
REMARK 465	GLY A	423
REMARK 465	LYS A	424
REMARK 465	GLN A	425
REMARK 465	LYS A	426
REMARK 465	LEU A	427
REMARK 465	SER A	428
REMARK 465	PHE A	429
REMARK 465	GLU A	430
REMARK 465	VAL A	484
REMARK 465	GLU A	485
REMARK 465	GLY A	486
REMARK 465	GLY A	487
REMARK 465	ALA A	488
REMARK 465	HIS A	489
REMARK 465	ASP A	490
REMARK 465	VAL A	491
REMARK 465	ILE A	492
REMARK 465	VAL A	493
REMARK 465	LYS A	494
REMARK 465	ASP A	495
REMARK 465	ARG A	496
REMARK 465	ILE A	497
REMARK 465	ASN A	498
REMARK 465	ASP A	499
REMARK 465	TYR A	500
REMARK 465	HIS A	501
REMARK 465	PRO A	502
REMARK 465	LYS A	503

REMARK 500  
REMARK 500 GEOMETRY AND STEREOCHEMISTRY  
REMARK 500 SUBTOPIC: COVALENT BOND LENGTHS  
REMARK 500  
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES  
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE  
REMARK 500 THAN 6\* $\text{RMSD}$  ( $\text{M}=\text{MODEL NUMBER}$ ;  $\text{RES}=\text{RESIDUE NAME}$ ;  $\text{C}=\text{CHAIN}$   
REMARK 500 IDENTIFIER;  $\text{SSEQ}=\text{SEQUENCE NUMBER}$ ;  $\text{I}=\text{INSERTION CODE}$ ).  
REMARK 500  
REMARK 500 STANDARD TABLE:  
REMARK 500 FORMAT: (10X,I3,1X,2(A3,1X,A1,I4,A1,1X,A4,3X),F6.3)  
REMARK 500  
REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991  
REMARK 500

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REMARK 500 M RES CSSEQI ATM1 RES CSSEQI ATM2 DEVIATION
REMARK 500 VAL A 62 CB VAL A 62 CA 0.036
REMARK 500 MET A 92 CE MET A 92 SD -0.071
REMARK 500 MET A 458 CE MET A 458 SD 0.037
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND ANGLES
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,3(1X,A4,2X),12X,F5.1)
REMARK 500
REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991
REMARK 500
REMARK 500 M RES CSSEQI ATM1 ATM2 ATM3
REMARK 500 GLY A 20 N - CA - C ANGL. DEV. = -7.9 DEGREES
REMARK 500 ILE A 27 N - CA - C ANGL. DEV. = -9.5 DEGREES
REMARK 500 PHE A 266 N - CA - C ANGL. DEV. = -7.5 DEGREES
REMARK 500 GLY A 312 N - CA - C ANGL. DEV. = 7.8 DEGREES
REMARK 500 LYS A 472 N - CA - C ANGL. DEV. = 8.0 DEGREES
REMARK 500 LYS A 474 N - CA - C ANGL. DEV. = -8.4 DEGREES
REMARK 500 LEU A 477 N - CA - C ANGL. DEV. = -8.5 DEGREES
REMARK 900
REMARK 900 RELATED ENTRIES
REMARK 900 RELATED ID: 1AK5 RELATED DB: PDB
REMARK 900 INOSINE MONOPHOSPHATE DEHYDROGENASE (IMPDH) FROM
REMARK 900 TRITRICHOMONAS FOETUS
REMARK 900 RELATED ID: 1ME7 RELATED DB: PDB
REMARK 900 1ME7 CONTAINS THE SAME PROTEIN WITH RVP AND MOA BOUND
REMARK 900 RELATED ID: 1ME8 RELATED DB: PDB
REMARK 900 1ME8 CONTAINS THE SAME PROTEIN WITH RVP BOUND
REMARK 900 RELATED ID: 1ME9 RELATED DB: PDB
REMARK 900 1ME9 CONTAINS THE SAME PROTEIN WITH IMP BOUND
REMARK 900 RELATED ID: 1MEH RELATED DB: PDB
REMARK 900 1MEH CONTAINS THE SAME PROTEIN WITH IMP AND MOA BOUND
REMARK 900 RELATED ID: 1MEI RELATED DB: PDB
REMARK 900 1MEI CONTAINS THE SAME PROTEIN WITH XMP AND MYCOPHENOLIC
REMARK 900 ACID BOUND
DBREF 1MEW A 1 503 SWS P50097 IMDH_TRIFO 1 503
SEQRES 1 A 503 MET ALA LYS TYR TYR ASN GLU PRO CYS HIS THR PHE ASN
SEQRES 2 A 503 GLU TYR LEU LEU ILE PRO GLY LEU SER THR VAL ASP CYS
SEQRES 3 A 503 ILE PRO SER ASN VAL ASN LEU SER THR PRO LEU VAL LYS
SEQRES 4 A 503 PHE GLN LYS GLY GLN GLN SER GLU ILE ASN LEU LYS ILE
SEQRES 5 A 503 PRO LEU VAL SER ALA ILE MET GLN SER VAL SER GLY GLU
SEQRES 6 A 503 LYS MET ALA ILE ALA LEU ALA ARG GLU GLY GLY ILE SER
SEQRES 7 A 503 PHE ILE PHE GLY SER GLN SER ILE GLU SER GLN ALA ALA
SEQRES 8 A 503 MET VAL HIS ALA VAL LYS ASN PHE LYS ALA GLY PHE VAL
SEQRES 9 A 503 VAL SER ASP SER ASN VAL LYS PRO ASP GLN THR PHE ALA
SEQRES 10 A 503 ASP VAL LEU ALA ILE SER GLN ARG THR THR HIS ASN THR
SEQRES 11 A 503 VAL ALA VAL THR ASP ASP GLY THR PRO HIS GLY VAL LEU
SEQRES 12 A 503 LEU GLY LEU VAL THR GLN ARG ASP TYR PRO ILE ASP LEU
SEQRES 13 A 503 THR GLN THR GLU THR LYS VAL SER ASP MET MET THR PRO
SEQRES 14 A 503 PHE SER LYS LEU VAL THR ALA HIS GLN ASP THR LYS LEU

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SEQRES 15 A 503 SER GLU ALA ASN LYS ILE ILE TRP GLU LYS LYS LEU ASN
SEQRES 16 A 503 ALA LEU PRO ILE ILE ASP ASP ASP GLN HIS LEU ARG TYR
SEQRES 17 A 503 ILE VAL PHE ARG LYS ASP TYR ASP ARG SER GLN VAL CYS
SEQRES 18 A 503 HIS ASN GLU LEU VAL ASP SER GLN LYS ARG TYR LEU VAL
SEQRES 19 A 503 GLY ALA GLY ILE ASN THR ARG ASP PHE ARG GLU ARG VAL
SEQRES 20 A 503 PRO ALA LEU VAL GLU ALA GLY ALA ASP VAL LEU CYS ILE
SEQRES 21 A 503 ASP SER SER ASP GLY PHE SER GLU TRP GLN LYS ILE THR
SEQRES 22 A 503 ILE GLY TRP ILE ARG GLU LYS TYR GLY ASP LYS VAL LYS
SEQRES 23 A 503 VAL GLY ALA GLY ASN ILE VAL ASP GLY GLU GLY PHE ARG
SEQRES 24 A 503 TYR LEU ALA ASP ALA GLY ALA ASP PHE ILE LYS ILE GLY
SEQRES 25 A 503 ILE GLY GLY GLY SER ILE CYS ILE THR ARG GLU GLN LYS
SEQRES 26 A 503 GLY ILE GLY ARG GLY GLN ALA THR ALA VAL ILE ASP VAL
SEQRES 27 A 503 VAL ALA GLU ARG ASN LYS TYR PHE GLU GLU THR GLY ILE
SEQRES 28 A 503 TYR ILE PRO VAL CYS SER ASP GLY GLY ILE VAL TYR ASP
SEQRES 29 A 503 TYR HIS MET THR LEU ALA LEU ALA MET GLY ALA ASP PHE
SEQRES 30 A 503 ILE MET LEU GLY ARG TYR PHE ALA ARG PHE GLU GLU SER
SEQRES 31 A 503 PRO THR ARG LYS VAL THR ILE ASN GLY SER VAL MET LYS
SEQRES 32 A 503 GLU TYR TRP GLY GLU GLY SER SER ARG ALA ARG ASN TRP
SEQRES 33 A 503 GLN ARG TYR ASP LEU GLY GLY LYS GLN LYS LEU SER PHE
SEQRES 34 A 503 GLU GLU GLY VAL ASP SER TYR VAL PRO TYR ALA GLY LYS
SEQRES 35 A 503 LEU LYS ASP ASN VAL GLU ALA SER LEU ASN LYS VAL LYS
SEQRES 36 A 503 SER THR MET CYS ASN CYS GLY ALA LEU THR ILE PRO GLN
SEQRES 37 A 503 LEU GLN SER LYS ALA LYS ILE THR LEU VAL SER SER VAL
SEQRES 38 A 503 SER ILE VAL GLU GLY GLY ALA HIS ASP VAL ILE VAL LYS
SEQRES 39 A 503 ASP ARG ILE ASN ASP TYR HIS PRO LYS

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HET K A 900 1

HET XMP 602 24

HET NAD 987 44

HETNAM K POTASSIUM ION

HETNAM XMP XANTHOSINE-5'-MONOPHOSPHATE

HETNAM NAD NICOTINAMIDE-ADENINE-DINUCLEOTIDE

HETSYN XMP 5--MONOPHOSPHATE-9-BETA-D-RIBOFURANOSYL XANTHINE

FORMUL 2 K K1 1+

FORMUL 3 XMP C10 H14 N4 O9 P1 1+

FORMUL 4 NAD C21 H27 N7 O14 P2

FORMUL 5 HOH \*164 (H2 O1)

HELIX 1 1 THR A 11 ASN A 13 5 3

HELIX 2 2 ILE A 27 VAL A 31 5 5

HELIX 3 3 GLY A 64 GLU A 74 1 11

HELIX 4 4 SER A 85 ASN A 98 1 14

HELIX 5 5 ASP A 242 GLY A 254 1 13

HELIX 6 6 SER A 267 GLY A 282 1 16

HELIX 7 7 ASP A 283 VAL A 285 5 3

HELIX 8 8 ASP A 294 GLY A 305 1 12

HELIX 9 9 GLY A 330 GLY A 350 1 21

HELIX 10 10 TYR A 363 MET A 373 1 11

HELIX 11 11 GLY A 381 ARG A 386 1 6

HELIX 12 12 LYS A 442 CYS A 461 1 20

HELIX 13 13 THR A 465 ALA A 473 1 9

SHEET 1 A 2 TYR A 15 LEU A 17 0

SHEET 2 A 2 ILE A 475 LEU A 477 -1 O THR A 476 N LEU A 16

SHEET 1 B 2 THR A 35 PRO A 36 0

SHEET 2 B 2 ASN A 49 LEU A 50 -1 O LEU A 50 N THR A 35

SHEET 1 C 2 PHE A 40 GLN A 41 0

SHEET 2 C 2 ILE A 351 TYR A 352 -1 O TYR A 352 N PHE A 40

SHEET 1 D 9 LEU A 54 SER A 56 0

SHEET 2 D 9 ILE A 77 ILE A 80 1 O ILE A 77 N SER A 56

SHEET	3	D 9	GLY A 235	ILE A 238	1	O	GLY A 237	N	ILE A 80	
SHEET	4	D 9	VAL A 257	ILE A 260	1	O	CYS A 259	N	ILE A 238	
SHEET	5	D 9	VAL A 287	ILE A 292	1	O	GLY A 288	N	LEU A 258	
SHEET	6	D 9	PHE A 308	ILE A 311	1	O	LYS A 310	N	ALA A 289	
SHEET	7	D 9	VAL A 355	ASP A 358	1	O	CYS A 356	N	ILE A 311	
SHEET	8	D 9	PHE A 377	LEU A 380	1	O	MET A 379	N	SER A 357	
SHEET	9	D 9	LEU A 54	SER A 56	1	N	VAL A 55	O	ILE A 378	
SHEET	1	E 3	LYS A 394	ILE A 397	0					
SHEET	2	E 3	SER A 400	TRP A 406	-1	O	MET A 402	N	VAL A 395	
SHEET	3	E 3	ASP A 434	PRO A 438	-1	O	SER A 435	N	TYR A 405	
SSBOND	1	CYS A	26	CYS A	459					
CISPEP	1	GLY A	290	ASN A	291	0		1.02		
CRYST1	153.827	153.827	153.827	90.00	90.00	90.00	P 4 3 2		24	
ORIGX1	1.000000	0.000000	0.000000			0.000000				
ORIGX2	0.000000	1.000000	0.000000			0.000000				
ORIGX3	0.000000	0.000000	1.000000			0.000000				
SCALE1	0.006501	0.000000	0.000000			0.000000				
SCALE2	0.000000	0.006501	0.000000			0.000000				
SCALE3	0.000000	0.000000	0.006501			0.000000				
ATOM	1	N	ALA A 2	54.794	74.512	36.618	1.00	30.12		N
ATOM	2	CA	ALA A 2	55.518	73.408	35.927	1.00	29.62		C
ATOM	3	C	ALA A 2	56.825	73.048	36.643	1.00	30.02		C
ATOM	4	O	ALA A 2	57.295	73.782	37.518	1.00	28.78		O
ATOM	5	CB	ALA A 2	55.807	73.811	34.492	1.00	29.41		C
ATOM	6	N	LYS A 3	57.397	71.908	36.261	1.00	29.90		N
ATOM	7	CA	LYS A 3	58.649	71.435	36.834	1.00	30.45		C
ATOM	8	C	LYS A 3	59.766	71.663	35.818	1.00	30.17		C
ATOM	9	O	LYS A 3	59.626	71.311	34.648	1.00	29.92		O
ATOM	10	CB	LYS A 3	58.564	69.938	37.150	1.00	31.27		C
ATOM	11	CG	LYS A 3	59.840	69.374	37.767	1.00	33.74		C
ATOM	12	CD	LYS A 3	59.988	67.882	37.515	1.00	35.82		C
ATOM	13	CE	LYS A 3	61.209	67.325	38.235	1.00	37.03		C
ATOM	14	NZ	LYS A 3	62.422	68.153	38.000	1.00	37.77		N
ATOM	15	N	TYR A 4	60.868	72.249	36.273	1.00	30.13		N
ATOM	16	CA	TYR A 4	62.022	72.523	35.421	1.00	30.22		C
ATOM	17	C	TYR A 4	63.218	71.738	35.939	1.00	30.80		C
ATOM	18	O	TYR A 4	63.151	71.131	37.003	1.00	31.54		O
ATOM	19	CB	TYR A 4	62.333	74.023	35.429	1.00	29.07		C
ATOM	20	CG	TYR A 4	61.238	74.845	34.800	1.00	28.39		C
ATOM	21	CD1	TYR A 4	61.148	74.974	33.417	1.00	27.65		C
ATOM	22	CD2	TYR A 4	60.260	75.464	35.588	1.00	28.22		C
ATOM	23	CE1	TYR A 4	60.106	75.701	32.827	1.00	27.89		C
ATOM	24	CE2	TYR A 4	59.213	76.192	35.007	1.00	27.42		C
ATOM	25	CZ	TYR A 4	59.145	76.304	33.629	1.00	27.38		C
ATOM	26	OH	TYR A 4	58.116	77.005	33.045	1.00	27.02		O
ATOM	27	N	TYR A 5	64.313	71.749	35.190	1.00	31.44		N
ATOM	28	CA	TYR A 5	65.508	71.016	35.597	1.00	32.16		C
ATOM	29	C	TYR A 5	66.719	71.930	35.741	1.00	32.66		C
ATOM	30	O	TYR A 5	66.779	73.005	35.142	1.00	32.67		O
ATOM	31	CB	TYR A 5	65.806	69.894	34.594	1.00	31.56		C
ATOM	32	CG	TYR A 5	64.679	68.891	34.466	1.00	31.13		C
ATOM	33	CD1	TYR A 5	63.511	69.212	33.777	1.00	30.96		C
ATOM	34	CD2	TYR A 5	64.763	67.634	35.073	1.00	31.04		C
ATOM	35	CE1	TYR A 5	62.453	68.311	33.694	1.00	30.92		C
ATOM	36	CE2	TYR A 5	63.713	66.726	34.997	1.00	30.33		C
ATOM	37	CZ	TYR A 5	62.559	67.071	34.307	1.00	31.08		C
ATOM	38	OH	TYR A 5	61.504	66.189	34.242	1.00	30.49		O

TABLE 5

ATOM	39	N	ASN	A	6	67.681	71.495	36.545	1.00	33.45	N
ATOM	40	CA	ASN	A	6	68.889	72.271	36.796	1.00	34.17	C
ATOM	41	C	ASN	A	6	69.829	72.350	35.596	1.00	33.77	C
ATOM	42	O	ASN	A	6	70.505	73.357	35.404	1.00	34.57	O
ATOM	43	CB	ASN	A	6	69.635	71.684	37.997	1.00	36.09	C
ATOM	44	CG	ASN	A	6	68.893	71.902	39.311	1.00	38.01	C
ATOM	45	OD1	ASN	A	6	69.083	71.156	40.276	1.00	39.34	O
ATOM	46	ND2	ASN	A	6	68.054	72.936	39.356	1.00	38.72	N
ATOM	47	N	GLU	A	7	69.868	71.296	34.786	1.00	32.81	N
ATOM	48	CA	GLU	A	7	70.752	71.262	33.623	1.00	31.44	C
ATOM	49	C	GLU	A	7	70.016	70.880	32.351	1.00	30.04	C
ATOM	50	O	GLU	A	7	69.016	70.166	32.393	1.00	29.37	O
ATOM	51	CB	GLU	A	7	71.870	70.238	33.840	1.00	32.95	C
ATOM	52	CG	GLU	A	7	72.811	70.511	35.009	1.00	34.80	C
ATOM	53	CD	GLU	A	7	73.665	71.758	34.814	1.00	36.26	C
ATOM	54	OE1	GLU	A	7	74.098	72.025	33.667	1.00	37.11	O
ATOM	55	OE2	GLU	A	7	73.919	72.463	35.816	1.00	37.12	O
ATOM	56	N	PRO	A	8	70.505	71.353	31.193	1.00	28.73	N
ATOM	57	CA	PRO	A	8	69.854	71.015	29.925	1.00	27.94	C
ATOM	58	C	PRO	A	8	70.216	69.567	29.597	1.00	27.17	C
ATOM	59	O	PRO	A	8	71.198	69.043	30.127	1.00	26.26	O
ATOM	60	CB	PRO	A	8	70.481	72.004	28.945	1.00	27.85	C
ATOM	61	CG	PRO	A	8	71.873	72.153	29.484	1.00	27.96	C
ATOM	62	CD	PRO	A	8	71.641	72.268	30.975	1.00	28.51	C
ATOM	63	N	CYS	A	9	69.432	68.918	28.742	1.00	26.44	N
ATOM	64	CA	CYS	A	9	69.730	67.539	28.375	1.00	26.06	C
ATOM	65	C	CYS	A	9	70.788	67.503	27.266	1.00	25.59	C
ATOM	66	O	CYS	A	9	70.978	68.484	26.546	1.00	25.32	O
ATOM	67	CB	CYS	A	9	68.452	66.801	27.950	1.00	26.04	C
ATOM	68	SG	CYS	A	9	67.458	67.585	26.659	1.00	27.03	S
ATOM	69	N	HIS	A	10	71.478	66.373	27.146	1.00	25.08	N
ATOM	70	CA	HIS	A	10	72.545	66.203	26.163	1.00	24.94	C
ATOM	71	C	HIS	A	10	72.398	64.914	25.351	1.00	25.14	C
ATOM	72	O	HIS	A	10	71.761	63.957	25.789	1.00	24.67	O
ATOM	73	CB	HIS	A	10	73.900	66.172	26.875	1.00	25.17	C
ATOM	74	CG	HIS	A	10	74.154	67.356	27.755	1.00	25.33	C
ATOM	75	ND1	HIS	A	10	74.603	68.565	27.269	1.00	25.05	N
ATOM	76	CD2	HIS	A	10	74.016	67.517	29.092	1.00	25.00	C
ATOM	77	CE1	HIS	A	10	74.731	69.419	28.267	1.00	24.83	C
ATOM	78	NE2	HIS	A	10	74.381	68.807	29.385	1.00	25.63	N
ATOM	79	N	THR	A	11	73.012	64.905	24.174	1.00	25.28	N
ATOM	80	CA	THR	A	11	72.988	63.760	23.268	1.00	26.09	C
ATOM	81	C	THR	A	11	74.336	63.045	23.334	1.00	25.82	C
ATOM	82	O	THR	A	11	75.309	63.600	23.852	1.00	25.75	O
ATOM	83	CB	THR	A	11	72.759	64.210	21.814	1.00	26.08	C
ATOM	84	OG1	THR	A	11	73.768	65.160	21.456	1.00	27.99	O
ATOM	85	CG2	THR	A	11	71.401	64.859	21.655	1.00	26.96	C
ATOM	86	N	PHE	A	12	74.391	61.825	22.803	1.00	26.03	N
ATOM	87	CA	PHE	A	12	75.618	61.028	22.798	1.00	26.92	C
ATOM	88	C	PHE	A	12	76.820	61.750	22.185	1.00	27.61	C
ATOM	89	O	PHE	A	12	77.957	61.556	22.625	1.00	27.79	O
ATOM	90	CB	PHE	A	12	75.400	59.710	22.050	1.00	26.64	C
ATOM	91	CG	PHE	A	12	74.493	58.740	22.763	1.00	26.79	C
ATOM	92	CD1	PHE	A	12	74.631	58.510	24.131	1.00	26.53	C
ATOM	93	CD2	PHE	A	12	73.533	58.023	22.056	1.00	26.50	C
ATOM	94	CE1	PHE	A	12	73.826	57.577	24.787	1.00	26.96	C
ATOM	95	CE2	PHE	A	12	72.723	57.085	22.700	1.00	27.06	C

TABLE 5

ATOM	96	CZ	PHE	A	12	72.870	56.861	24.072	1.00	26.55	C
ATOM	97	N	ASN	A	13	76.567	62.569	21.167	1.00	28.01	N
ATOM	98	CA	ASN	A	13	77.614	63.330	20.484	1.00	28.79	C
ATOM	99	C	ASN	A	13	78.353	64.309	21.392	1.00	28.20	C
ATOM	100	O	ASN	A	13	79.409	64.822	21.027	1.00	28.50	O
ATOM	101	CB	ASN	A	13	77.013	64.115	19.316	1.00	30.83	C
ATOM	102	CG	ASN	A	13	76.925	63.299	18.041	1.00	33.42	C
ATOM	103	OD1	ASN	A	13	76.014	63.490	17.235	1.00	35.66	O
ATOM	104	ND2	ASN	A	13	77.883	62.400	17.838	1.00	34.84	N
ATOM	105	N	GLU	A	14	77.799	64.580	22.568	1.00	27.32	N
ATOM	106	CA	GLU	A	14	78.422	65.520	23.494	1.00	26.81	C
ATOM	107	C	GLU	A	14	79.333	64.863	24.528	1.00	26.48	C
ATOM	108	O	GLU	A	14	79.794	65.524	25.462	1.00	26.71	O
ATOM	109	CB	GLU	A	14	77.342	66.330	24.215	1.00	26.50	C
ATOM	110	CG	GLU	A	14	76.448	67.124	23.283	1.00	26.18	C
ATOM	111	CD	GLU	A	14	75.339	67.860	24.014	1.00	25.91	C
ATOM	112	OE1	GLU	A	14	75.643	68.736	24.848	1.00	25.89	O
ATOM	113	OE2	GLU	A	14	74.158	67.559	23.750	1.00	25.85	O
ATOM	114	N	TYR	A	15	79.610	63.576	24.363	1.00	25.89	N
ATOM	115	CA	TYR	A	15	80.454	62.880	25.325	1.00	25.89	C
ATOM	116	C	TYR	A	15	81.647	62.145	24.733	1.00	25.92	C
ATOM	117	O	TYR	A	15	81.652	61.758	23.562	1.00	25.82	O
ATOM	118	CB	TYR	A	15	79.616	61.876	26.122	1.00	25.79	C
ATOM	119	CG	TYR	A	15	78.551	62.505	26.986	1.00	26.02	C
ATOM	120	CD1	TYR	A	15	78.814	62.856	28.310	1.00	25.94	C
ATOM	121	CD2	TYR	A	15	77.276	62.757	26.475	1.00	25.51	C
ATOM	122	CE1	TYR	A	15	77.831	63.440	29.107	1.00	26.32	C
ATOM	123	CE2	TYR	A	15	76.296	63.339	27.256	1.00	25.69	C
ATOM	124	CZ	TYR	A	15	76.574	63.678	28.567	1.00	26.16	C
ATOM	125	OH	TYR	A	15	75.595	64.268	29.328	1.00	27.92	O
ATOM	126	N	LEU	A	16	82.659	61.958	25.571	1.00	25.68	N
ATOM	127	CA	LEU	A	16	83.857	61.221	25.201	1.00	25.59	C
ATOM	128	C	LEU	A	16	84.240	60.398	26.421	1.00	25.18	C
ATOM	129	O	LEU	A	16	83.879	60.741	27.545	1.00	23.99	O
ATOM	130	CB	LEU	A	16	85.011	62.163	24.835	1.00	25.74	C
ATOM	131	CG	LEU	A	16	84.924	62.928	23.513	1.00	26.58	C
ATOM	132	CD1	LEU	A	16	86.164	63.782	23.349	1.00	26.64	C
ATOM	133	CD2	LEU	A	16	84.802	61.955	22.355	1.00	26.82	C
ATOM	134	N	LEU	A	17	84.955	59.304	26.193	1.00	25.52	N
ATOM	135	CA	LEU	A	17	85.403	58.444	27.281	1.00	25.75	C
ATOM	136	C	LEU	A	17	86.873	58.726	27.569	1.00	25.91	C
ATOM	137	O	LEU	A	17	87.685	58.859	26.649	1.00	26.05	O
ATOM	138	CB	LEU	A	17	85.236	56.973	26.898	1.00	25.70	C
ATOM	139	CG	LEU	A	17	83.811	56.418	26.904	1.00	25.75	C
ATOM	140	CD1	LEU	A	17	83.715	55.203	25.988	1.00	25.70	C
ATOM	141	CD2	LEU	A	17	83.422	56.062	28.330	1.00	24.96	C
ATOM	142	N	ILE	A	18	87.207	58.841	28.848	1.00	26.13	N
ATOM	143	CA	ILE	A	18	88.584	59.070	29.247	1.00	26.23	C
ATOM	144	C	ILE	A	18	89.125	57.707	29.665	1.00	26.76	C
ATOM	145	O	ILE	A	18	88.568	57.054	30.547	1.00	26.89	O
ATOM	146	CB	ILE	A	18	88.657	60.077	30.408	1.00	26.10	C
ATOM	147	CG1	ILE	A	18	88.213	61.457	29.896	1.00	25.77	C
ATOM	148	CG2	ILE	A	18	90.078	60.122	30.983	1.00	25.02	C
ATOM	149	CD1	ILE	A	18	88.079	62.511	30.963	1.00	27.03	C
ATOM	150	N	PRO	A	19	90.209	57.251	29.016	1.00	27.09	N
ATOM	151	CA	PRO	A	19	90.821	55.949	29.319	1.00	27.41	C
ATOM	152	C	PRO	A	19	91.121	55.680	30.792	1.00	27.03	C



TABLE 5

ATOM	153	O	PRO	A	19	91.403	56.595	31.562	1.00	27.37	O
ATOM	154	CB	PRO	A	19	92.098	55.960	28.477	1.00	27.80	C
ATOM	155	CG	PRO	A	19	91.703	56.803	27.280	1.00	27.76	C
ATOM	156	CD	PRO	A	19	90.949	57.944	27.944	1.00	27.42	C
ATOM	157	N	GLY	A	20	91.040	54.410	31.169	1.00	26.77	N
ATOM	158	CA	GLY	A	20	91.346	54.000	32.528	1.00	26.84	C
ATOM	159	C	GLY	A	20	92.544	53.079	32.388	1.00	27.02	C
ATOM	160	O	GLY	A	20	93.130	53.018	31.314	1.00	26.32	O
ATOM	161	N	LEU	A	21	92.919	52.360	33.437	1.00	27.85	N
ATOM	162	CA	LEU	A	21	94.070	51.468	33.333	1.00	28.67	C
ATOM	163	C	LEU	A	21	93.765	50.236	32.500	1.00	29.29	C
ATOM	164	O	LEU	A	21	92.834	49.491	32.795	1.00	29.57	O
ATOM	165	CB	LEU	A	21	94.549	51.022	34.724	1.00	28.50	C
ATOM	166	CG	LEU	A	21	95.732	50.038	34.732	1.00	28.54	C
ATOM	167	CD1	LEU	A	21	96.928	50.654	34.003	1.00	27.17	C
ATOM	168	CD2	LEU	A	21	96.101	49.681	36.175	1.00	28.26	C
ATOM	169	N	SER	A	22	94.552	50.032	31.449	1.00	30.33	N
ATOM	170	CA	SER	A	22	94.392	48.867	30.592	1.00	31.39	C
ATOM	171	C	SER	A	22	95.419	47.829	31.039	1.00	32.61	C
ATOM	172	O	SER	A	22	96.626	48.063	30.930	1.00	32.22	O
ATOM	173	CB	SER	A	22	94.650	49.233	29.131	1.00	31.24	C
ATOM	174	OG	SER	A	22	93.690	50.152	28.652	1.00	31.78	O
ATOM	175	N	THR	A	23	94.941	46.693	31.547	1.00	33.62	N
ATOM	176	CA	THR	A	23	95.821	45.620	32.007	1.00	34.86	C
ATOM	177	C	THR	A	23	96.222	44.737	30.834	1.00	35.59	C
ATOM	178	O	THR	A	23	95.573	44.757	29.786	1.00	35.63	O
ATOM	179	CB	THR	A	23	95.132	44.727	33.059	1.00	35.00	C
ATOM	180	OG1	THR	A	23	93.945	44.160	32.493	1.00	36.07	O
ATOM	181	CG2	THR	A	23	94.766	45.533	34.295	1.00	35.01	C
ATOM	182	N	VAL	A	24	97.287	43.958	31.015	1.00	36.20	N
ATOM	183	CA	VAL	A	24	97.767	43.070	29.962	1.00	37.31	C
ATOM	184	C	VAL	A	24	96.717	42.041	29.553	1.00	38.42	C
ATOM	185	O	VAL	A	24	96.757	41.520	28.439	1.00	38.33	O
ATOM	186	CB	VAL	A	24	99.053	42.308	30.388	1.00	37.05	C
ATOM	187	CG1	VAL	A	24	100.194	43.295	30.612	1.00	36.36	C
ATOM	188	CG2	VAL	A	24	98.786	41.485	31.642	1.00	36.49	C
ATOM	189	N	ASP	A	25	95.773	41.749	30.441	1.00	39.90	N
ATOM	190	CA	ASP	A	25	94.753	40.772	30.101	1.00	41.78	C
ATOM	191	C	ASP	A	25	93.581	41.335	29.298	1.00	41.86	C
ATOM	192	O	ASP	A	25	92.762	40.570	28.794	1.00	42.34	O
ATOM	193	CB	ASP	A	25	94.251	40.050	31.362	1.00	43.81	C
ATOM	194	CG	ASP	A	25	93.534	40.968	32.323	1.00	45.75	C
ATOM	195	OD1	ASP	A	25	92.406	41.397	32.011	1.00	47.52	O
ATOM	196	OD2	ASP	A	25	94.099	41.261	33.400	1.00	48.02	O
ATOM	197	N	CYS	A	26	93.485	42.656	29.151	1.00	41.52	N
ATOM	198	CA	CYS	A	26	92.374	43.173	28.363	1.00	41.49	C
ATOM	199	C	CYS	A	26	92.701	43.323	26.898	1.00	41.58	C
ATOM	200	O	CYS	A	26	93.229	44.343	26.456	1.00	41.10	O
ATOM	201	CB	CYS	A	26	91.854	44.522	28.856	1.00	40.64	C
ATOM	202	SG	CYS	A	26	90.147	44.844	28.259	1.00	40.94	S
ATOM	203	N	ILE	A	27	92.379	42.281	26.151	1.00	42.19	N
ATOM	204	CA	ILE	A	27	92.563	42.280	24.721	1.00	42.85	C
ATOM	205	C	ILE	A	27	91.140	42.075	24.226	1.00	43.07	C
ATOM	206	O	ILE	A	27	90.327	41.450	24.911	1.00	42.66	O
ATOM	207	CB	ILE	A	27	93.491	41.125	24.265	1.00	43.47	C
ATOM	208	CG1	ILE	A	27	93.134	39.831	25.002	1.00	43.91	C
ATOM	209	CG2	ILE	A	27	94.940	41.501	24.523	1.00	43.28	C

TABLE 5

ATOM	210	CD1	ILE	A	27	94.064	38.662	24.686	1.00	44.36	C
ATOM	211	N	PRO	A	28	90.809	42.628	23.052	1.00	43.47	N
ATOM	212	CA	PRO	A	28	89.476	42.516	22.456	1.00	43.48	C
ATOM	213	C	PRO	A	28	88.861	41.117	22.465	1.00	43.56	C
ATOM	214	O	PRO	A	28	87.685	40.956	22.797	1.00	43.47	O
ATOM	215	CB	PRO	A	28	89.696	43.049	21.044	1.00	44.02	C
ATOM	216	CG	PRO	A	28	90.692	44.142	21.277	1.00	43.69	C
ATOM	217	CD	PRO	A	28	91.680	43.481	22.220	1.00	43.81	C
ATOM	218	N	SER	A	29	89.654	40.109	22.116	1.00	43.37	N
ATOM	219	CA	SER	A	29	89.152	38.739	22.065	1.00	43.09	C
ATOM	220	C	SER	A	29	88.731	38.182	23.422	1.00	42.29	C
ATOM	221	O	SER	A	29	88.027	37.176	23.493	1.00	42.98	O
ATOM	222	CB	SER	A	29	90.192	37.810	21.414	1.00	43.86	C
ATOM	223	OG	SER	A	29	91.393	37.743	22.165	1.00	45.20	O
ATOM	224	N	ASN	A	30	89.154	38.828	24.500	1.00	41.03	N
ATOM	225	CA	ASN	A	30	88.780	38.362	25.829	1.00	39.63	C
ATOM	226	C	ASN	A	30	87.608	39.158	26.410	1.00	37.78	C
ATOM	227	O	ASN	A	30	87.194	38.931	27.545	1.00	37.59	O
ATOM	228	CB	ASN	A	30	89.986	38.429	26.765	1.00	41.20	C
ATOM	229	CG	ASN	A	30	90.922	37.244	26.591	1.00	42.75	C
ATOM	230	OD1	ASN	A	30	91.261	36.864	25.468	1.00	43.71	O
ATOM	231	ND2	ASN	A	30	91.345	36.656	27.704	1.00	43.38	N
ATOM	232	N	VAL	A	31	87.072	40.088	25.627	1.00	35.31	N
ATOM	233	CA	VAL	A	31	85.948	40.894	26.087	1.00	33.17	C
ATOM	234	C	VAL	A	31	84.636	40.127	25.953	1.00	32.15	C
ATOM	235	O	VAL	A	31	84.319	39.593	24.892	1.00	31.40	O
ATOM	236	CB	VAL	A	31	85.847	42.227	25.302	1.00	32.76	C
ATOM	237	CG1	VAL	A	31	84.590	42.989	25.715	1.00	31.80	C
ATOM	238	CG2	VAL	A	31	87.088	43.074	25.570	1.00	32.13	C
ATOM	239	N	ASN	A	32	83.887	40.075	27.047	1.00	30.94	N
ATOM	240	CA	ASN	A	32	82.604	39.383	27.088	1.00	30.49	C
ATOM	241	C	ASN	A	32	81.503	40.434	26.951	1.00	29.50	C
ATOM	242	O	ASN	A	32	81.363	41.307	27.804	1.00	29.55	O
ATOM	243	CB	ASN	A	32	82.474	38.633	28.421	1.00	30.56	C
ATOM	244	CG	ASN	A	32	81.174	37.862	28.542	1.00	31.78	C
ATOM	245	OD1	ASN	A	32	80.279	37.978	27.705	1.00	31.47	O
ATOM	246	ND2	ASN	A	32	81.062	37.068	29.604	1.00	32.67	N
ATOM	247	N	LEU	A	33	80.728	40.343	25.875	1.00	28.85	N
ATOM	248	CA	LEU	A	33	79.647	41.290	25.591	1.00	28.13	C
ATOM	249	C	LEU	A	33	78.259	40.780	25.983	1.00	27.84	C
ATOM	250	O	LEU	A	33	77.240	41.298	25.524	1.00	28.25	O
ATOM	251	CB	LEU	A	33	79.662	41.637	24.101	1.00	27.87	C
ATOM	252	CG	LEU	A	33	80.228	42.982	23.621	1.00	28.18	C
ATOM	253	CD1	LEU	A	33	81.299	43.515	24.546	1.00	27.71	C
ATOM	254	CD2	LEU	A	33	80.757	42.799	22.215	1.00	27.10	C
ATOM	255	N	SER	A	34	78.223	39.762	26.828	1.00	27.39	N
ATOM	256	CA	SER	A	34	76.963	39.183	27.291	1.00	27.16	C
ATOM	257	C	SER	A	34	76.204	40.218	28.129	1.00	26.24	C
ATOM	258	O	SER	A	34	76.814	41.063	28.774	1.00	25.91	O
ATOM	259	CB	SER	A	34	77.263	37.930	28.124	1.00	27.60	C
ATOM	260	OG	SER	A	34	76.102	37.434	28.756	1.00	30.45	O
ATOM	261	N	THR	A	35	74.877	40.157	28.124	1.00	25.86	N
ATOM	262	CA	THR	A	35	74.095	41.125	28.885	1.00	24.92	C
ATOM	263	C	THR	A	35	72.687	40.592	29.158	1.00	24.89	C
ATOM	264	O	THR	A	35	72.115	39.865	28.344	1.00	25.03	O
ATOM	265	CB	THR	A	35	74.021	42.485	28.121	1.00	25.02	C
ATOM	266	OG1	THR	A	35	73.744	43.549	29.040	1.00	25.25	O

TABLE 5

ATOM	267	CG2	THR	A	35	72.931	42.456	27.070	1.00	24.69	C
ATOM	268	N	PRO	A	36	72.109	40.948	30.314	1.00	24.52	N
ATOM	269	CA	PRO	A	36	70.761	40.485	30.665	1.00	24.57	C
ATOM	270	C	PRO	A	36	69.651	41.167	29.867	1.00	25.00	C
ATOM	271	O	PRO	A	36	69.697	42.375	29.631	1.00	25.19	O
ATOM	272	CB	PRO	A	36	70.672	40.797	32.155	1.00	24.46	C
ATOM	273	CG	PRO	A	36	71.479	42.072	32.264	1.00	24.23	C
ATOM	274	CD	PRO	A	36	72.684	41.786	31.383	1.00	24.01	C
ATOM	275	N	LEU	A	37	68.651	40.393	29.456	1.00	24.96	N
ATOM	276	CA	LEU	A	37	67.535	40.946	28.705	1.00	25.21	C
ATOM	277	C	LEU	A	37	66.308	41.179	29.593	1.00	25.43	C
ATOM	278	O	LEU	A	37	65.599	42.175	29.426	1.00	25.20	O
ATOM	279	CB	LEU	A	37	67.156	40.017	27.546	1.00	24.90	C
ATOM	280	CG	LEU	A	37	66.049	40.506	26.599	1.00	25.00	C
ATOM	281	CD1	LEU	A	37	66.593	41.629	25.709	1.00	24.59	C
ATOM	282	CD2	LEU	A	37	65.550	39.351	25.729	1.00	24.58	C
ATOM	283	N	VAL	A	38	66.061	40.274	30.539	1.00	25.54	N
ATOM	284	CA	VAL	A	38	64.896	40.397	31.415	1.00	25.63	C
ATOM	285	C	VAL	A	38	65.241	40.442	32.904	1.00	26.35	C
ATOM	286	O	VAL	A	38	66.268	39.919	33.335	1.00	26.41	O
ATOM	287	CB	VAL	A	38	63.885	39.262	31.136	1.00	25.83	C
ATOM	288	CG1	VAL	A	38	63.410	39.357	29.679	1.00	25.31	C
ATOM	289	CG2	VAL	A	38	64.523	37.895	31.398	1.00	24.98	C
ATOM	290	N	LYS	A	39	64.368	41.074	33.682	1.00	26.62	N
ATOM	291	CA	LYS	A	39	64.588	41.251	35.113	1.00	27.40	C
ATOM	292	C	LYS	A	39	64.768	39.986	35.943	1.00	27.98	C
ATOM	293	O	LYS	A	39	64.220	38.926	35.625	1.00	28.34	O
ATOM	294	CB	LYS	A	39	63.453	42.085	35.722	1.00	27.32	C
ATOM	295	CG	LYS	A	39	62.098	41.400	35.710	1.00	27.27	C
ATOM	296	CD	LYS	A	39	61.075	42.203	36.491	1.00	27.48	C
ATOM	297	CE	LYS	A	39	59.703	41.538	36.465	1.00	27.05	C
ATOM	298	NZ	LYS	A	39	58.735	42.262	37.335	1.00	26.75	N
ATOM	299	N	PHE	A	40	65.539	40.133	37.017	1.00	28.20	N
ATOM	300	CA	PHE	A	40	65.828	39.057	37.958	1.00	29.34	C
ATOM	301	C	PHE	A	40	66.082	39.682	39.337	1.00	30.13	C
ATOM	302	O	PHE	A	40	66.226	40.899	39.447	1.00	30.16	O
ATOM	303	CB	PHE	A	40	67.058	38.258	37.501	1.00	28.35	C
ATOM	304	CG	PHE	A	40	68.264	39.110	37.197	1.00	27.78	C
ATOM	305	CD1	PHE	A	40	68.448	39.650	35.924	1.00	26.96	C
ATOM	306	CD2	PHE	A	40	69.209	39.379	38.183	1.00	27.28	C
ATOM	307	CE1	PHE	A	40	69.553	40.442	35.635	1.00	26.45	C
ATOM	308	CE2	PHE	A	40	70.325	40.174	37.907	1.00	27.06	C
ATOM	309	CZ	PHE	A	40	70.497	40.706	36.628	1.00	27.14	C
ATOM	310	N	GLN	A	41	66.130	38.851	40.379	1.00	31.29	N
ATOM	311	CA	GLN	A	41	66.358	39.317	41.754	1.00	32.59	C
ATOM	312	C	GLN	A	41	67.851	39.354	42.054	1.00	32.23	C
ATOM	313	O	GLN	A	41	68.637	38.714	41.362	1.00	31.49	O
ATOM	314	CB	GLN	A	41	65.698	38.365	42.759	1.00	34.28	C
ATOM	315	CG	GLN	A	41	64.249	38.045	42.486	1.00	37.74	C
ATOM	316	CD	GLN	A	41	63.310	39.092	43.041	1.00	40.33	C
ATOM	317	OE1	GLN	A	41	63.397	40.277	42.694	1.00	41.23	O
ATOM	318	NE2	GLN	A	41	62.397	38.662	43.916	1.00	41.92	N
ATOM	319	N	LYS	A	42	68.245	40.084	43.095	1.00	32.61	N
ATOM	320	CA	LYS	A	42	69.659	40.152	43.442	1.00	33.23	C
ATOM	321	C	LYS	A	42	70.235	38.768	43.716	1.00	33.05	C
ATOM	322	O	LYS	A	42	69.609	37.943	44.384	1.00	32.65	O
ATOM	323	CB	LYS	A	42	69.898	41.024	44.672	1.00	34.37	C

TABLE 5

ATOM	324	CG	LYS	A	42	71.380	41.106	45.002	1.00	36.49	C
ATOM	325	CD	LYS	A	42	71.712	42.108	46.093	1.00	38.56	C
ATOM	326	CE	LYS	A	42	71.361	41.595	47.463	1.00	38.86	C
ATOM	327	NZ	LYS	A	42	71.973	42.474	48.502	1.00	40.12	N
ATOM	328	N	GLY	A	43	71.432	38.518	43.198	1.00	32.94	N
ATOM	329	CA	GLY	A	43	72.064	37.231	43.414	1.00	32.98	C
ATOM	330	C	GLY	A	43	71.847	36.234	42.297	1.00	32.97	C
ATOM	331	O	GLY	A	43	72.611	35.279	42.170	1.00	32.75	O
ATOM	332	N	GLN	A	44	70.815	36.430	41.483	1.00	33.23	N
ATOM	333	CA	GLN	A	44	70.580	35.498	40.388	1.00	33.79	C
ATOM	334	C	GLN	A	44	70.996	36.029	39.023	1.00	33.69	C
ATOM	335	O	GLN	A	44	71.505	37.139	38.906	1.00	33.63	O
ATOM	336	CB	GLN	A	44	69.113	35.039	40.362	1.00	34.55	C
ATOM	337	CG	GLN	A	44	68.093	36.090	40.695	1.00	35.61	C
ATOM	338	CD	GLN	A	44	66.677	35.538	40.781	1.00	35.93	C
ATOM	339	OE1	GLN	A	44	66.382	34.665	41.599	1.00	37.13	O
ATOM	340	NE2	GLN	A	44	65.793	36.051	39.938	1.00	35.37	N
ATOM	341	N	GLN	A	45	70.803	35.204	37.999	1.00	33.77	N
ATOM	342	CA	GLN	A	45	71.135	35.560	36.623	1.00	33.60	C
ATOM	343	C	GLN	A	45	69.832	35.752	35.874	1.00	32.34	C
ATOM	344	O	GLN	A	45	68.794	35.245	36.287	1.00	31.56	O
ATOM	345	CB	GLN	A	45	71.921	34.432	35.938	1.00	35.04	C
ATOM	346	CG	GLN	A	45	73.297	34.165	36.516	1.00	37.78	C
ATOM	347	CD	GLN	A	45	74.285	35.267	36.191	1.00	39.44	C
ATOM	348	OE1	GLN	A	45	74.613	35.497	35.022	1.00	40.59	O
ATOM	349	NE2	GLN	A	45	74.767	35.959	37.225	1.00	39.68	N
ATOM	350	N	SER	A	46	69.889	36.483	34.771	1.00	31.43	N
ATOM	351	CA	SER	A	46	68.701	36.703	33.969	1.00	31.01	C
ATOM	352	C	SER	A	46	68.396	35.419	33.211	1.00	30.99	C
ATOM	353	O	SER	A	46	69.312	34.730	32.766	1.00	31.11	O
ATOM	354	CB	SER	A	46	68.931	37.833	32.964	1.00	30.11	C
ATOM	355	OG	SER	A	46	67.752	38.074	32.219	1.00	28.77	O
ATOM	356	N	GLU	A	47	67.113	35.100	33.068	1.00	31.10	N
ATOM	357	CA	GLU	A	47	66.708	33.905	32.337	1.00	31.53	C
ATOM	358	C	GLU	A	47	67.119	34.002	30.877	1.00	31.11	C
ATOM	359	O	GLU	A	47	67.311	32.985	30.215	1.00	31.30	O
ATOM	360	CB	GLU	A	47	65.198	33.710	32.427	1.00	32.16	C
ATOM	361	CG	GLU	A	47	64.717	33.337	33.814	1.00	34.70	C
ATOM	362	CD	GLU	A	47	63.211	33.402	33.933	1.00	36.22	C
ATOM	363	OE1	GLU	A	47	62.524	32.650	33.208	1.00	37.59	O
ATOM	364	OE2	GLU	A	47	62.715	34.211	34.747	1.00	37.82	O
ATOM	365	N	ILE	A	48	67.233	35.226	30.367	1.00	30.49	N
ATOM	366	CA	ILE	A	48	67.643	35.431	28.981	1.00	29.71	C
ATOM	367	C	ILE	A	48	68.791	36.432	28.911	1.00	29.44	C
ATOM	368	O	ILE	A	48	68.670	37.575	29.356	1.00	29.08	O
ATOM	369	CB	ILE	A	48	66.488	35.962	28.099	1.00	30.08	C
ATOM	370	CG1	ILE	A	48	65.281	35.021	28.171	1.00	30.16	C
ATOM	371	CG2	ILE	A	48	66.967	36.091	26.653	1.00	29.55	C
ATOM	372	CD1	ILE	A	48	64.082	35.489	27.348	1.00	29.84	C
ATOM	373	N	ASN	A	49	69.905	35.988	28.347	1.00	28.86	N
ATOM	374	CA	ASN	A	49	71.085	36.820	28.198	1.00	29.07	C
ATOM	375	C	ASN	A	49	71.483	36.882	26.730	1.00	28.95	C
ATOM	376	O	ASN	A	49	71.609	35.852	26.067	1.00	29.13	O
ATOM	377	CB	ASN	A	49	72.245	36.245	29.021	1.00	28.75	C
ATOM	378	CG	ASN	A	49	72.023	36.385	30.515	1.00	28.90	C
ATOM	379	OD1	ASN	A	49	72.210	37.459	31.084	1.00	28.55	O
ATOM	380	ND2	ASN	A	49	71.609	35.302	31.155	1.00	29.52	N

TABLE 5

ATOM	381	N	LEU A	50	71.658	38.094	26.220	1.00	28.25	N
ATOM	382	CA	LEU A	50	72.071	38.273	24.834	1.00	27.70	C
ATOM	383	C	LEU A	50	73.568	37.994	24.791	1.00	27.62	C
ATOM	384	O	LEU A	50	74.252	38.178	25.793	1.00	27.10	O
ATOM	385	CB	LEU A	50	71.814	39.718	24.389	1.00	26.87	C
ATOM	386	CG	LEU A	50	70.381	40.241	24.527	1.00	27.52	C
ATOM	387	CD1	LEU A	50	70.339	41.740	24.227	1.00	27.19	C
ATOM	388	CD2	LEU A	50	69.467	39.465	23.588	1.00	27.05	C
ATOM	389	N	LYS A	51	74.073	37.541	23.646	1.00	28.04	N
ATOM	390	CA	LYS A	51	75.507	37.286	23.493	1.00	28.80	C
ATOM	391	C	LYS A	51	76.182	38.622	23.166	1.00	27.80	C
ATOM	392	O	LYS A	51	77.351	38.834	23.481	1.00	28.10	O
ATOM	393	CB	LYS A	51	75.772	36.277	22.364	1.00	30.63	C
ATOM	394	CG	LYS A	51	76.038	34.848	22.827	1.00	32.96	C
ATOM	395	CD	LYS A	51	74.829	34.217	23.460	1.00	34.61	C
ATOM	396	CE	LYS A	51	75.131	32.788	23.913	1.00	35.94	C
ATOM	397	NZ	LYS A	51	75.513	31.887	22.788	1.00	36.84	N
ATOM	398	N	ILE A	52	75.431	39.508	22.518	1.00	26.90	N
ATOM	399	CA	ILE A	52	75.899	40.848	22.177	1.00	26.16	C
ATOM	400	C	ILE A	52	74.759	41.798	22.556	1.00	26.14	C
ATOM	401	O	ILE A	52	73.583	41.452	22.430	1.00	26.42	O
ATOM	402	CB	ILE A	52	76.247	40.989	20.671	1.00	25.90	C
ATOM	403	CG1	ILE A	52	75.041	40.634	19.803	1.00	25.37	C
ATOM	404	CG2	ILE A	52	77.443	40.086	20.329	1.00	25.95	C
ATOM	405	CD1	ILE A	52	75.244	40.975	18.331	1.00	24.51	C
ATOM	406	N	PRO A	53	75.093	43.011	23.016	1.00	25.79	N
ATOM	407	CA	PRO A	53	74.090	43.999	23.431	1.00	25.66	C
ATOM	408	C	PRO A	53	73.334	44.765	22.345	1.00	25.90	C
ATOM	409	O	PRO A	53	73.041	45.947	22.521	1.00	26.17	O
ATOM	410	CB	PRO A	53	74.900	44.929	24.319	1.00	24.87	C
ATOM	411	CG	PRO A	53	76.207	44.999	23.568	1.00	25.16	C
ATOM	412	CD	PRO A	53	76.459	43.553	23.167	1.00	25.11	C
ATOM	413	N	LEU A	54	73.002	44.101	21.241	1.00	25.97	N
ATOM	414	CA	LEU A	54	72.285	44.767	20.157	1.00	25.81	C
ATOM	415	C	LEU A	54	70.975	44.072	19.799	1.00	26.02	C
ATOM	416	O	LEU A	54	70.931	42.847	19.653	1.00	26.13	O
ATOM	417	CB	LEU A	54	73.160	44.839	18.897	1.00	25.47	C
ATOM	418	CG	LEU A	54	74.556	45.459	19.009	1.00	26.34	C
ATOM	419	CD1	LEU A	54	75.216	45.494	17.627	1.00	26.06	C
ATOM	420	CD2	LEU A	54	74.458	46.863	19.591	1.00	26.01	C
ATOM	421	N	VAL A	55	69.911	44.858	19.668	1.00	25.53	N
ATOM	422	CA	VAL A	55	68.614	44.325	19.277	1.00	25.73	C
ATOM	423	C	VAL A	55	68.078	45.236	18.172	1.00	26.28	C
ATOM	424	O	VAL A	55	68.287	46.455	18.207	1.00	26.42	O
ATOM	425	CB	VAL A	55	67.612	44.265	20.477	1.00	25.52	C
ATOM	426	CG1	VAL A	55	68.262	43.550	21.654	1.00	24.72	C
ATOM	427	CG2	VAL A	55	67.139	45.656	20.868	1.00	24.62	C
ATOM	428	N	SER A	56	67.418	44.652	17.174	1.00	26.19	N
ATOM	429	CA	SER A	56	66.884	45.447	16.073	1.00	25.97	C
ATOM	430	C	SER A	56	65.508	46.017	16.417	1.00	25.83	C
ATOM	431	O	SER A	56	64.700	45.373	17.089	1.00	25.99	O
ATOM	432	CB	SER A	56	66.831	44.610	14.788	1.00	25.77	C
ATOM	433	OG	SER A	56	66.050	43.446	14.965	1.00	26.05	O
ATOM	434	N	ALA A	57	65.264	47.238	15.957	1.00	25.89	N
ATOM	435	CA	ALA A	57	64.024	47.966	16.218	1.00	26.47	C
ATOM	436	C	ALA A	57	62.721	47.300	15.756	1.00	27.16	C
ATOM	437	O	ALA A	57	62.692	46.554	14.779	1.00	27.22	O

TABLE 5

ATOM	438	CB	ALA	A	57	64.133	49.358	15.619	1.00	25.66	C
ATOM	439	N	ILE	A	58	61.643	47.594	16.478	1.00	27.68	N
ATOM	440	CA	ILE	A	58	60.316	47.056	16.184	1.00	28.41	C
ATOM	441	C	ILE	A	58	59.737	47.863	15.021	1.00	28.86	C
ATOM	442	O	ILE	A	58	58.795	48.644	15.194	1.00	29.04	O
ATOM	443	CB	ILE	A	58	59.388	47.204	17.414	1.00	27.86	C
ATOM	444	CG1	ILE	A	58	60.156	46.808	18.683	1.00	27.40	C
ATOM	445	CG2	ILE	A	58	58.145	46.335	17.239	1.00	27.81	C
ATOM	446	CD1	ILE	A	58	59.338	46.846	19.959	1.00	26.01	C
ATOM	447	N	MET	A	59	60.304	47.659	13.836	1.00	29.07	N
ATOM	448	CA	MET	A	59	59.896	48.407	12.652	1.00	29.93	C
ATOM	449	C	MET	A	59	59.747	47.546	11.400	1.00	30.41	C
ATOM	450	O	MET	A	59	60.510	46.605	11.185	1.00	29.96	O
ATOM	451	CB	MET	A	59	60.922	49.507	12.379	1.00	29.62	C
ATOM	452	CG	MET	A	59	61.172	50.439	13.556	1.00	29.09	C
ATOM	453	SD	MET	A	59	62.564	51.543	13.248	1.00	29.35	S
ATOM	454	CE	MET	A	59	61.850	52.630	12.008	1.00	28.25	C
ATOM	455	N	GLN	A	60	58.766	47.901	10.575	1.00	31.54	N
ATOM	456	CA	GLN	A	60	58.476	47.186	9.331	1.00	32.53	C
ATOM	457	C	GLN	A	60	59.685	47.152	8.411	1.00	32.76	C
ATOM	458	O	GLN	A	60	59.904	46.173	7.707	1.00	32.70	O
ATOM	459	CB	GLN	A	60	57.334	47.862	8.565	1.00	32.88	C
ATOM	460	CG	GLN	A	60	56.084	48.176	9.362	1.00	34.01	C
ATOM	461	CD	GLN	A	60	55.010	48.821	8.497	1.00	34.77	C
ATOM	462	OE1	GLN	A	60	55.313	49.611	7.603	1.00	35.73	O
ATOM	463	NE2	GLN	A	60	53.749	48.497	8.767	1.00	35.22	N
ATOM	464	N	SER	A	61	60.463	48.232	8.418	1.00	33.31	N
ATOM	465	CA	SER	A	61	61.629	48.334	7.552	1.00	33.30	C
ATOM	466	C	SER	A	61	62.931	47.752	8.099	1.00	33.20	C
ATOM	467	O	SER	A	61	63.988	47.933	7.492	1.00	33.61	O
ATOM	468	CB	SER	A	61	61.853	49.799	7.143	1.00	33.43	C
ATOM	469	OG	SER	A	61	62.047	50.635	8.271	1.00	35.07	O
ATOM	470	N	VAL	A	62	62.875	47.052	9.227	1.00	32.70	N
ATOM	471	CA	VAL	A	62	64.101	46.475	9.764	1.00	32.55	C
ATOM	472	C	VAL	A	62	63.999	45.079	10.358	1.00	32.60	C
ATOM	473	O	VAL	A	62	64.800	44.213	10.026	1.00	33.59	O
ATOM	474	CB	VAL	A	62	64.789	47.432	10.810	1.00	32.46	C
ATOM	475	CG1	VAL	A	62	63.860	48.545	11.206	1.00	32.31	C
ATOM	476	CG2	VAL	A	62	65.245	46.655	12.041	1.00	31.54	C
ATOM	477	N	SER	A	63	63.017	44.838	11.215	1.00	33.04	N
ATOM	478	CA	SER	A	63	62.924	43.531	11.845	1.00	32.74	C
ATOM	479	C	SER	A	63	61.986	42.510	11.214	1.00	33.02	C
ATOM	480	O	SER	A	63	60.871	42.283	11.692	1.00	32.02	O
ATOM	481	CB	SER	A	63	62.600	43.700	13.331	1.00	32.70	C
ATOM	482	OG	SER	A	63	63.666	44.356	14.005	1.00	31.78	O
ATOM	483	N	GLY	A	64	62.467	41.894	10.138	1.00	33.46	N
ATOM	484	CA	GLY	A	64	61.717	40.857	9.454	1.00	33.96	C
ATOM	485	C	GLY	A	64	62.338	39.518	9.829	1.00	34.68	C
ATOM	486	O	GLY	A	64	63.160	39.455	10.749	1.00	33.86	O
ATOM	487	N	GLU	A	65	61.961	38.453	9.123	1.00	35.46	N
ATOM	488	CA	GLU	A	65	62.482	37.113	9.394	1.00	36.69	C
ATOM	489	C	GLU	A	65	63.987	36.993	9.207	1.00	36.64	C
ATOM	490	O	GLU	A	65	64.694	36.532	10.101	1.00	36.51	O
ATOM	491	CB	GLU	A	65	61.809	36.077	8.489	1.00	38.32	C
ATOM	492	CG	GLU	A	65	60.441	35.608	8.946	1.00	41.08	C
ATOM	493	CD	GLU	A	65	59.808	34.623	7.964	1.00	42.59	C
ATOM	494	OE1	GLU	A	65	60.483	33.631	7.595	1.00	43.43	O

ATOM	495	OE2	GLU	A	65	58.639	34.844	7.568	1.00	42.90	O
ATOM	496	N	LYS	A	66	64.470	37.386	8.033	1.00	36.50	N
ATOM	497	CA	LYS	A	66	65.891	37.293	7.734	1.00	36.67	C
ATOM	498	C	LYS	A	66	66.729	38.082	8.734	1.00	35.70	C
ATOM	499	O	LYS	A	66	67.803	37.639	9.137	1.00	35.10	O
ATOM	500	CB	LYS	A	66	66.164	37.775	6.304	1.00	37.83	C
ATOM	501	CG	LYS	A	66	65.512	36.899	5.242	1.00	40.02	C
ATOM	502	CD	LYS	A	66	65.935	37.299	3.828	1.00	42.33	C
ATOM	503	CE	LYS	A	66	65.202	36.465	2.776	1.00	43.21	C
ATOM	504	NZ	LYS	A	66	65.582	36.849	1.381	1.00	44.57	N
ATOM	505	N	MET	A	67	66.231	39.247	9.134	1.00	34.61	N
ATOM	506	CA	MET	A	67	66.938	40.068	10.105	1.00	33.55	C
ATOM	507	C	MET	A	67	67.023	39.306	11.427	1.00	32.84	C
ATOM	508	O	MET	A	67	68.104	39.148	11.995	1.00	32.24	O
ATOM	509	CB	MET	A	67	66.204	41.394	10.322	1.00	33.32	C
ATOM	510	CG	MET	A	67	66.868	42.316	11.338	1.00	32.81	C
ATOM	511	SD	MET	A	67	68.526	42.816	10.844	1.00	32.40	S
ATOM	512	CE	MET	A	67	68.141	43.942	9.476	1.00	31.53	C
ATOM	513	N	ALA	A	68	65.877	38.825	11.899	1.00	31.91	N
ATOM	514	CA	ALA	A	68	65.811	38.093	13.156	1.00	31.69	C
ATOM	515	C	ALA	A	68	66.789	36.928	13.183	1.00	31.70	C
ATOM	516	O	ALA	A	68	67.459	36.686	14.190	1.00	31.79	O
ATOM	517	CB	ALA	A	68	64.389	37.592	13.394	1.00	31.52	C
ATOM	518	N	ILE	A	69	66.866	36.203	12.073	1.00	31.40	N
ATOM	519	CA	ILE	A	69	67.766	35.061	11.969	1.00	31.19	C
ATOM	520	C	ILE	A	69	69.226	35.511	11.942	1.00	30.56	C
ATOM	521	O	ILE	A	69	70.059	34.992	12.686	1.00	30.98	O
ATOM	522	CB	ILE	A	69	67.452	34.234	10.691	1.00	31.73	C
ATOM	523	CG1	ILE	A	69	66.083	33.563	10.836	1.00	32.13	C
ATOM	524	CG2	ILE	A	69	68.529	33.184	10.459	1.00	32.02	C
ATOM	525	CD1	ILE	A	69	65.529	33.009	9.536	1.00	32.48	C
ATOM	526	N	ALA	A	70	69.526	36.484	11.088	1.00	29.80	N
ATOM	527	CA	ALA	A	70	70.882	36.998	10.953	1.00	29.27	C
ATOM	528	C	ALA	A	70	71.425	37.592	12.249	1.00	28.89	C
ATOM	529	O	ALA	A	70	72.589	37.391	12.583	1.00	28.35	O
ATOM	530	CB	ALA	A	70	70.932	38.041	9.847	1.00	29.17	C
ATOM	531	N	LEU	A	71	70.585	38.324	12.979	1.00	28.72	N
ATOM	532	CA	LEU	A	71	71.027	38.937	14.224	1.00	28.35	C
ATOM	533	C	LEU	A	71	71.187	37.890	15.316	1.00	28.41	C
ATOM	534	O	LEU	A	71	72.158	37.913	16.064	1.00	27.56	O
ATOM	535	CB	LEU	A	71	70.044	40.021	14.669	1.00	27.97	C
ATOM	536	CG	LEU	A	71	70.409	40.792	15.945	1.00	27.65	C
ATOM	537	CD1	LEU	A	71	71.861	41.254	15.890	1.00	26.83	C
ATOM	538	CD2	LEU	A	71	69.476	41.990	16.092	1.00	27.34	C
ATOM	539	N	ALA	A	72	70.235	36.967	15.398	1.00	29.11	N
ATOM	540	CA	ALA	A	72	70.302	35.911	16.400	1.00	30.05	C
ATOM	541	C	ALA	A	72	71.587	35.109	16.211	1.00	30.73	C
ATOM	542	O	ALA	A	72	72.212	34.688	17.187	1.00	30.22	O
ATOM	543	CB	ALA	A	72	69.081	34.992	16.288	1.00	29.99	C
ATOM	544	N	ARG	A	73	71.980	34.900	14.955	1.00	31.51	N
ATOM	545	CA	ARG	A	73	73.203	34.152	14.659	1.00	32.60	C
ATOM	546	C	ARG	A	73	74.432	34.827	15.253	1.00	32.59	C
ATOM	547	O	ARG	A	73	75.402	34.161	15.602	1.00	32.71	O
ATOM	548	CB	ARG	A	73	73.392	34.000	13.147	1.00	33.56	C
ATOM	549	CG	ARG	A	73	72.540	32.910	12.528	1.00	35.32	C
ATOM	550	CD	ARG	A	73	72.697	32.866	11.022	1.00	36.95	C
ATOM	551	NE	ARG	A	73	71.978	31.732	10.448	1.00	39.16	N

TABLE 5

ATOM	552	CZ	ARG	A	73	71.740	31.572	9.149	1.00	39.97	C
ATOM	553	NH1	ARG	A	73	72.161	32.476	8.274	1.00	39.65	N
ATOM	554	NH2	ARG	A	73	71.075	30.505	8.726	1.00	40.71	N
ATOM	555	N	GLU	A	74	74.384	36.151	15.368	1.00	32.40	N
ATOM	556	CA	GLU	A	74	75.498	36.908	15.920	1.00	32.28	C
ATOM	557	C	GLU	A	74	75.397	37.091	17.430	1.00	31.45	C
ATOM	558	O	GLU	A	74	76.299	37.642	18.047	1.00	31.66	O
ATOM	559	CB	GLU	A	74	75.595	38.274	15.235	1.00	33.47	C
ATOM	560	CG	GLU	A	74	75.967	38.197	13.759	1.00	35.41	C
ATOM	561	CD	GLU	A	74	77.306	37.510	13.524	1.00	37.04	C
ATOM	562	OE1	GLU	A	74	78.337	38.018	14.017	1.00	37.82	O
ATOM	563	OE2	GLU	A	74	77.325	36.458	12.846	1.00	38.54	O
ATOM	564	N	GLY	A	75	74.295	36.646	18.026	1.00	30.81	N
ATOM	565	CA	GLY	A	75	74.152	36.774	19.467	1.00	30.19	C
ATOM	566	C	GLY	A	75	73.133	37.780	19.966	1.00	29.59	C
ATOM	567	O	GLY	A	75	72.909	37.888	21.176	1.00	28.90	O
ATOM	568	N	GLY	A	76	72.524	38.522	19.044	1.00	29.15	N
ATOM	569	CA	GLY	A	76	71.526	39.504	19.427	1.00	28.52	C
ATOM	570	C	GLY	A	76	70.124	38.968	19.194	1.00	28.42	C
ATOM	571	O	GLY	A	76	69.949	37.769	18.970	1.00	28.19	O
ATOM	572	N	ILE	A	77	69.124	39.846	19.250	1.00	27.85	N
ATOM	573	CA	ILE	A	77	67.744	39.435	19.026	1.00	27.34	C
ATOM	574	C	ILE	A	77	66.963	40.538	18.315	1.00	27.73	C
ATOM	575	O	ILE	A	77	67.228	41.730	18.507	1.00	27.71	O
ATOM	576	CB	ILE	A	77	67.043	39.089	20.363	1.00	26.95	C
ATOM	577	CG1	ILE	A	77	65.811	38.217	20.097	1.00	26.86	C
ATOM	578	CG2	ILE	A	77	66.642	40.370	21.099	1.00	26.54	C
ATOM	579	CD1	ILE	A	77	65.128	37.709	21.362	1.00	25.58	C
ATOM	580	N	SER	A	78	66.010	40.135	17.481	1.00	27.61	N
ATOM	581	CA	SER	A	78	65.176	41.083	16.752	1.00	27.42	C
ATOM	582	C	SER	A	78	63.763	41.054	17.313	1.00	27.91	C
ATOM	583	O	SER	A	78	63.317	40.045	17.858	1.00	27.91	O
ATOM	584	CB	SER	A	78	65.104	40.721	15.264	1.00	26.86	C
ATOM	585	OG	SER	A	78	66.353	40.859	14.618	1.00	26.59	O
ATOM	586	N	PHE	A	79	63.056	42.166	17.180	1.00	28.37	N
ATOM	587	CA	PHE	A	79	61.681	42.228	17.634	1.00	28.70	C
ATOM	588	C	PHE	A	79	60.796	42.394	16.403	1.00	29.22	C
ATOM	589	O	PHE	A	79	60.599	43.505	15.920	1.00	29.28	O
ATOM	590	CB	PHE	A	79	61.489	43.389	18.620	1.00	28.26	C
ATOM	591	CG	PHE	A	79	62.076	43.121	19.980	1.00	28.13	C
ATOM	592	CD1	PHE	A	79	63.421	43.363	20.234	1.00	28.01	C
ATOM	593	CD2	PHE	A	79	61.291	42.574	20.995	1.00	28.23	C
ATOM	594	CE1	PHE	A	79	63.981	43.063	21.479	1.00	28.23	C
ATOM	595	CE2	PHE	A	79	61.840	42.270	22.244	1.00	27.87	C
ATOM	596	CZ	PHE	A	79	63.185	42.514	22.485	1.00	27.96	C
ATOM	597	N	ILE	A	80	60.286	41.279	15.880	1.00	30.20	N
ATOM	598	CA	ILE	A	80	59.426	41.316	14.697	1.00	30.73	C
ATOM	599	C	ILE	A	80	58.372	42.393	14.884	1.00	31.00	C
ATOM	600	O	ILE	A	80	57.661	42.407	15.892	1.00	30.84	O
ATOM	601	CB	ILE	A	80	58.730	39.948	14.441	1.00	31.03	C
ATOM	602	CG1	ILE	A	80	59.673	39.001	13.696	1.00	31.69	C
ATOM	603	CG2	ILE	A	80	57.508	40.137	13.549	1.00	30.82	C
ATOM	604	CD1	ILE	A	80	60.976	38.770	14.361	1.00	32.86	C
ATOM	605	N	PHE	A	81	58.277	43.299	13.914	1.00	31.46	N
ATOM	606	CA	PHE	A	81	57.318	44.387	14.010	1.00	32.33	C
ATOM	607	C	PHE	A	81	55.884	43.903	14.193	1.00	32.76	C
ATOM	608	O	PHE	A	81	55.464	42.908	13.595	1.00	32.74	O



ATOM	609	CB	PHE	A	81	57.417	45.316	12.788	1.00	32.73	C
ATOM	610	CG	PHE	A	81	57.167	44.635	11.470	1.00	33.07	C
ATOM	611	CD1	PHE	A	81	58.155	43.859	10.872	1.00	33.23	C
ATOM	612	CD2	PHE	A	81	55.949	44.796	10.812	1.00	33.18	C
ATOM	613	CE1	PHE	A	81	57.937	43.251	9.629	1.00	33.42	C
ATOM	614	CE2	PHE	A	81	55.717	44.194	9.571	1.00	33.24	C
ATOM	615	CZ	PHE	A	81	56.716	43.420	8.979	1.00	33.26	C
ATOM	616	N	GLY	A	82	55.143	44.615	15.035	1.00	33.07	N
ATOM	617	CA	GLY	A	82	53.763	44.260	15.303	1.00	34.00	C
ATOM	618	C	GLY	A	82	52.780	45.069	14.481	1.00	34.67	C
ATOM	619	O	GLY	A	82	51.567	44.884	14.600	1.00	34.70	O
ATOM	620	N	SER	A	83	53.300	45.971	13.651	1.00	35.05	N
ATOM	621	CA	SER	A	83	52.459	46.795	12.791	1.00	35.41	C
ATOM	622	C	SER	A	83	52.095	45.999	11.538	1.00	36.15	C
ATOM	623	O	SER	A	83	52.438	46.367	10.411	1.00	36.11	O
ATOM	624	CB	SER	A	83	53.185	48.085	12.409	1.00	35.00	C
ATOM	625	OG	SER	A	83	54.407	47.807	11.755	1.00	34.80	O
ATOM	626	N	GLN	A	84	51.411	44.884	11.766	1.00	36.71	N
ATOM	627	CA	GLN	A	84	50.952	43.993	10.714	1.00	37.15	C
ATOM	628	C	GLN	A	84	49.907	43.107	11.386	1.00	37.55	C
ATOM	629	O	GLN	A	84	49.734	43.173	12.605	1.00	37.38	O
ATOM	630	CB	GLN	A	84	52.115	43.157	10.165	1.00	37.55	C
ATOM	631	CG	GLN	A	84	52.783	42.238	11.179	1.00	37.88	C
ATOM	632	CD	GLN	A	84	53.907	41.426	10.569	1.00	38.47	C
ATOM	633	OE1	GLN	A	84	53.730	40.791	9.530	1.00	39.45	O
ATOM	634	NE2	GLN	A	84	55.072	41.435	11.214	1.00	38.16	N
ATOM	635	N	SER	A	85	49.208	42.286	10.610	1.00	37.98	N
ATOM	636	CA	SER	A	85	48.177	41.427	11.183	1.00	38.63	C
ATOM	637	C	SER	A	85	48.755	40.456	12.205	1.00	39.17	C
ATOM	638	O	SER	A	85	49.922	40.068	12.119	1.00	39.21	O
ATOM	639	CB	SER	A	85	47.471	40.625	10.089	1.00	38.43	C
ATOM	640	OG	SER	A	85	48.237	39.491	9.726	1.00	38.74	O
ATOM	641	N	ILE	A	86	47.928	40.059	13.167	1.00	39.52	N
ATOM	642	CA	ILE	A	86	48.348	39.116	14.192	1.00	40.46	C
ATOM	643	C	ILE	A	86	48.837	37.827	13.533	1.00	41.43	C
ATOM	644	O	ILE	A	86	49.832	37.239	13.959	1.00	41.37	O
ATOM	645	CB	ILE	A	86	47.179	38.792	15.155	1.00	40.12	C
ATOM	646	CG1	ILE	A	86	46.847	40.034	15.993	1.00	40.13	C
ATOM	647	CG2	ILE	A	86	47.533	37.605	16.043	1.00	39.47	C
ATOM	648	CD1	ILE	A	86	45.631	39.878	16.891	1.00	39.39	C
ATOM	649	N	GLU	A	87	48.139	37.403	12.480	1.00	42.20	N
ATOM	650	CA	GLU	A	87	48.497	36.182	11.768	1.00	42.84	C
ATOM	651	C	GLU	A	87	49.845	36.280	11.057	1.00	42.23	C
ATOM	652	O	GLU	A	87	50.633	35.337	11.089	1.00	42.25	O
ATOM	653	CB	GLU	A	87	47.405	35.809	10.755	1.00	44.28	C
ATOM	654	CG	GLU	A	87	46.291	36.848	10.587	1.00	46.83	C
ATOM	655	CD	GLU	A	87	45.454	37.041	11.847	1.00	47.87	C
ATOM	656	OE1	GLU	A	87	44.982	36.030	12.416	1.00	48.85	O
ATOM	657	OE2	GLU	A	87	45.261	38.206	12.264	1.00	48.52	O
ATOM	658	N	SER	A	88	50.108	37.415	10.416	1.00	41.90	N
ATOM	659	CA	SER	A	88	51.372	37.617	9.710	1.00	41.64	C
ATOM	660	C	SER	A	88	52.563	37.665	10.665	1.00	40.67	C
ATOM	661	O	SER	A	88	53.596	37.048	10.409	1.00	40.52	O
ATOM	662	CB	SER	A	88	51.337	38.916	8.902	1.00	42.19	C
ATOM	663	OG	SER	A	88	50.359	38.853	7.882	1.00	44.49	O
ATOM	664	N	GLN	A	89	52.423	38.405	11.759	1.00	39.75	N
ATOM	665	CA	GLN	A	89	53.507	38.518	12.729	1.00	39.13	C

TABLE 5

ATOM	666	C	GLN	A	89	53.805	37.160	13.353	1.00	38.91	C
ATOM	667	O	GLN	A	89	54.964	36.754	13.453	1.00	38.76	O
ATOM	668	CB	GLN	A	89	53.151	39.534	13.821	1.00	38.26	C
ATOM	669	CG	GLN	A	89	54.226	39.689	14.888	1.00	37.37	C
ATOM	670	CD	GLN	A	89	53.860	40.714	15.946	1.00	36.90	C
ATOM	671	OE1	GLN	A	89	52.692	40.870	16.299	1.00	36.35	O
ATOM	672	NE2	GLN	A	89	54.863	41.407	16.470	1.00	36.22	N
ATOM	673	N	ALA	A	90	52.753	36.457	13.762	1.00	39.14	N
ATOM	674	CA	ALA	A	90	52.902	35.140	14.370	1.00	39.24	C
ATOM	675	C	ALA	A	90	53.587	34.185	13.395	1.00	39.46	C
ATOM	676	O	ALA	A	90	54.404	33.354	13.798	1.00	39.52	O
ATOM	677	CB	ALA	A	90	51.537	34.593	14.774	1.00	39.44	C
ATOM	678	N	ALA	A	91	53.260	34.312	12.112	1.00	39.32	N
ATOM	679	CA	ALA	A	91	53.856	33.456	11.093	1.00	39.50	C
ATOM	680	C	ALA	A	91	55.357	33.724	10.984	1.00	39.72	C
ATOM	681	O	ALA	A	91	56.154	32.793	10.840	1.00	39.86	O
ATOM	682	CB	ALA	A	91	53.177	33.689	9.745	1.00	39.16	C
ATOM	683	N	MET	A	92	55.741	34.995	11.045	1.00	39.61	N
ATOM	684	CA	MET	A	92	57.151	35.352	10.967	1.00	39.71	C
ATOM	685	C	MET	A	92	57.889	34.791	12.173	1.00	39.19	C
ATOM	686	O	MET	A	92	58.990	34.258	12.041	1.00	39.13	O
ATOM	687	CB	MET	A	92	57.326	36.871	10.918	1.00	40.44	C
ATOM	688	CG	MET	A	92	56.931	37.495	9.598	1.00	41.57	C
ATOM	689	SD	MET	A	92	57.352	39.245	9.523	1.00	42.86	S
ATOM	690	CE	MET	A	92	59.055	39.148	9.746	1.00	43.00	C
ATOM	691	N	VAL	A	93	57.277	34.917	13.348	1.00	38.70	N
ATOM	692	CA	VAL	A	93	57.871	34.413	14.581	1.00	38.24	C
ATOM	693	C	VAL	A	93	58.066	32.909	14.452	1.00	38.82	C
ATOM	694	O	VAL	A	93	59.139	32.381	14.744	1.00	38.41	O
ATOM	695	CB	VAL	A	93	56.962	34.708	15.800	1.00	37.90	C
ATOM	696	CG1	VAL	A	93	57.400	33.883	17.003	1.00	37.53	C
ATOM	697	CG2	VAL	A	93	57.011	36.185	16.133	1.00	37.21	C
ATOM	698	N	HIS	A	94	57.018	32.226	14.001	1.00	39.48	N
ATOM	699	CA	HIS	A	94	57.061	30.778	13.828	1.00	40.12	C
ATOM	700	C	HIS	A	94	58.181	30.377	12.866	1.00	39.88	C
ATOM	701	O	HIS	A	94	58.927	29.434	13.127	1.00	39.95	O
ATOM	702	CB	HIS	A	94	55.722	30.274	13.288	1.00	41.19	C
ATOM	703	CG	HIS	A	94	55.595	28.785	13.294	1.00	42.21	C
ATOM	704	ND1	HIS	A	94	55.385	28.062	14.448	1.00	42.90	N
ATOM	705	CD2	HIS	A	94	55.676	27.879	12.291	1.00	42.67	C
ATOM	706	CE1	HIS	A	94	55.340	26.775	14.156	1.00	42.91	C
ATOM	707	NE2	HIS	A	94	55.515	26.637	12.854	1.00	43.21	N
ATOM	708	N	ALA	A	95	58.294	31.104	11.759	1.00	39.52	N
ATOM	709	CA	ALA	A	95	59.318	30.828	10.757	1.00	39.41	C
ATOM	710	C	ALA	A	95	60.732	30.903	11.336	1.00	39.70	C
ATOM	711	O	ALA	A	95	61.600	30.104	10.979	1.00	39.80	O
ATOM	712	CB	ALA	A	95	59.181	31.800	9.599	1.00	39.04	C
ATOM	713	N	VAL	A	96	60.968	31.868	12.221	1.00	39.80	N
ATOM	714	CA	VAL	A	96	62.280	32.022	12.834	1.00	39.46	C
ATOM	715	C	VAL	A	96	62.540	30.876	13.807	1.00	40.06	C
ATOM	716	O	VAL	A	96	63.640	30.322	13.851	1.00	40.00	O
ATOM	717	CB	VAL	A	96	62.392	33.367	13.593	1.00	39.16	C
ATOM	718	CG1	VAL	A	96	63.723	33.449	14.326	1.00	38.41	C
ATOM	719	CG2	VAL	A	96	62.264	34.522	12.617	1.00	38.80	C
ATOM	720	N	LYS	A	97	61.518	30.516	14.574	1.00	40.40	N
ATOM	721	CA	LYS	A	97	61.641	29.442	15.550	1.00	41.60	C
ATOM	722	C	LYS	A	97	61.861	28.063	14.927	1.00	42.73	C

TABLE 5

ATOM	723	O	LYS	A	97	62.472	27.193	15.548	1.00	42.73	O
ATOM	724	CB	LYS	A	97	60.398	29.405	16.448	1.00	40.87	C
ATOM	725	CG	LYS	A	97	60.165	30.681	17.242	1.00	39.77	C
ATOM	726	CD	LYS	A	97	61.374	31.020	18.112	1.00	38.88	C
ATOM	727	CE	LYS	A	97	61.645	29.938	19.146	1.00	38.08	C
ATOM	728	NZ	LYS	A	97	62.859	30.238	19.957	1.00	37.01	N
ATOM	729	N	ASN	A	98	61.373	27.867	13.705	1.00	44.37	N
ATOM	730	CA	ASN	A	98	61.509	26.579	13.024	1.00	46.53	C
ATOM	731	C	ASN	A	98	62.485	26.602	11.854	1.00	47.31	C
ATOM	732	O	ASN	A	98	62.519	25.664	11.056	1.00	47.58	O
ATOM	733	CB	ASN	A	98	60.146	26.112	12.506	1.00	47.72	C
ATOM	734	CG	ASN	A	98	59.160	25.828	13.621	1.00	49.35	C
ATOM	735	OD1	ASN	A	98	57.953	25.977	13.439	1.00	50.61	O
ATOM	736	ND2	ASN	A	98	59.664	25.403	14.778	1.00	49.87	N
ATOM	737	N	PHE	A	99	63.284	27.659	11.751	1.00	48.16	N
ATOM	738	CA	PHE	A	99	64.227	27.782	10.644	1.00	48.79	C
ATOM	739	C	PHE	A	99	65.234	26.636	10.519	1.00	49.62	C
ATOM	740	O	PHE	A	99	65.528	26.189	9.412	1.00	49.73	O
ATOM	741	CB	PHE	A	99	64.988	29.107	10.741	1.00	48.15	C
ATOM	742	CG	PHE	A	99	65.802	29.425	9.518	1.00	47.62	C
ATOM	743	CD1	PHE	A	99	65.179	29.755	8.319	1.00	47.45	C
ATOM	744	CD2	PHE	A	99	67.192	29.383	9.559	1.00	47.46	C
ATOM	745	CE1	PHE	A	99	65.928	30.038	7.177	1.00	47.25	C
ATOM	746	CE2	PHE	A	99	67.950	29.663	8.425	1.00	47.37	C
ATOM	747	CZ	PHE	A	99	67.317	29.992	7.231	1.00	47.38	C
ATOM	748	N	LYS	A	100	65.752	26.160	11.648	1.00	50.63	N
ATOM	749	CA	LYS	A	100	66.751	25.092	11.644	1.00	51.74	C
ATOM	750	C	LYS	A	100	66.180	23.677	11.537	1.00	52.59	C
ATOM	751	O	LYS	A	100	66.768	22.722	12.045	1.00	53.01	O
ATOM	752	CB	LYS	A	100	67.625	25.215	12.896	1.00	51.65	C
ATOM	753	CG	LYS	A	100	68.234	26.604	13.048	1.00	51.70	C
ATOM	754	CD	LYS	A	100	68.860	26.837	14.417	1.00	51.72	C
ATOM	755	CE	LYS	A	100	70.214	26.175	14.552	1.00	51.52	C
ATOM	756	NZ	LYS	A	100	70.846	26.548	15.844	1.00	51.13	N
ATOM	757	N	ALA	A	101	65.041	23.543	10.864	1.00	53.24	N
ATOM	758	CA	ALA	A	101	64.402	22.241	10.691	1.00	53.65	C
ATOM	759	C	ALA	A	101	64.609	21.717	9.270	1.00	53.86	C
ATOM	760	O	ALA	A	101	64.007	22.218	8.317	1.00	53.99	O
ATOM	761	CB	ALA	A	101	62.908	22.347	10.997	1.00	53.63	C
ATOM	762	N	HIS	A	222	79.084	30.118	16.803	1.00	56.10	N
ATOM	763	CA	HIS	A	222	79.441	29.875	18.198	1.00	56.03	C
ATOM	764	C	HIS	A	222	78.777	30.884	19.132	1.00	54.99	C
ATOM	765	O	HIS	A	222	78.609	30.624	20.326	1.00	54.92	O
ATOM	766	CB	HIS	A	222	80.964	29.929	18.373	1.00	57.63	C
ATOM	767	CG	HIS	A	222	81.692	28.829	17.662	1.00	59.44	C
ATOM	768	ND1	HIS	A	222	81.472	27.495	17.935	1.00	60.05	N
ATOM	769	CD2	HIS	A	222	82.619	28.863	16.675	1.00	60.20	C
ATOM	770	CE1	HIS	A	222	82.231	26.755	17.145	1.00	60.69	C
ATOM	771	NE2	HIS	A	222	82.937	27.560	16.370	1.00	60.70	N
ATOM	772	N	ASN	A	223	78.399	32.036	18.588	1.00	53.33	N
ATOM	773	CA	ASN	A	223	77.749	33.058	19.391	1.00	51.76	C
ATOM	774	C	ASN	A	223	76.279	33.236	19.049	1.00	49.93	C
ATOM	775	O	ASN	A	223	75.713	34.298	19.289	1.00	49.49	O
ATOM	776	CB	ASN	A	223	78.473	34.399	19.249	1.00	52.87	C
ATOM	777	CG	ASN	A	223	79.779	34.438	20.020	1.00	53.79	C
ATOM	778	OD1	ASN	A	223	80.743	33.748	19.676	1.00	54.29	O
ATOM	779	ND2	ASN	A	223	79.815	35.244	21.078	1.00	54.20	N

ATOM	780	N	GLU	A	224	75.657	32.201	18.490	1.00	47.90	N
ATOM	781	CA	GLU	A	224	74.243	32.288	18.148	1.00	46.08	C
ATOM	782	C	GLU	A	224	73.406	32.282	19.418	1.00	43.99	C
ATOM	783	O	GLU	A	224	73.720	31.581	20.379	1.00	42.95	O
ATOM	784	CB	GLU	A	224	73.816	31.127	17.239	1.00	46.94	C
ATOM	785	CG	GLU	A	224	74.134	29.736	17.778	1.00	48.84	C
ATOM	786	CD	GLU	A	224	73.590	28.616	16.896	1.00	49.60	C
ATOM	787	OE1	GLU	A	224	73.641	28.749	15.651	1.00	50.06	O
ATOM	788	OE2	GLU	A	224	73.126	27.594	17.452	1.00	49.95	O
ATOM	789	N	LEU	A	225	72.350	33.086	19.418	1.00	42.15	N
ATOM	790	CA	LEU	A	225	71.453	33.175	20.558	1.00	40.63	C
ATOM	791	C	LEU	A	225	70.303	32.200	20.332	1.00	39.80	C
ATOM	792	O	LEU	A	225	69.475	32.407	19.445	1.00	39.10	O
ATOM	793	CB	LEU	A	225	70.915	34.600	20.692	1.00	39.95	C
ATOM	794	CG	LEU	A	225	70.043	34.870	21.920	1.00	39.53	C
ATOM	795	CD1	LEU	A	225	70.866	34.649	23.180	1.00	39.09	C
ATOM	796	CD2	LEU	A	225	69.509	36.292	21.871	1.00	38.92	C
ATOM	797	N	VAL	A	226	70.255	31.143	21.138	1.00	39.41	N
ATOM	798	CA	VAL	A	226	69.216	30.121	21.005	1.00	39.48	C
ATOM	799	C	VAL	A	226	68.609	29.668	22.334	1.00	39.55	C
ATOM	800	O	VAL	A	226	69.121	29.985	23.409	1.00	39.03	O
ATOM	801	CB	VAL	A	226	69.772	28.859	20.301	1.00	39.18	C
ATOM	802	CG1	VAL	A	226	70.195	29.185	18.873	1.00	38.53	C
ATOM	803	CG2	VAL	A	226	70.951	28.313	21.092	1.00	39.07	C
ATOM	804	N	ASP	A	227	67.506	28.926	22.245	1.00	40.09	N
ATOM	805	CA	ASP	A	227	66.848	28.399	23.431	1.00	40.34	C
ATOM	806	C	ASP	A	227	67.377	26.996	23.720	1.00	41.22	C
ATOM	807	O	ASP	A	227	68.309	26.530	23.058	1.00	40.82	O
ATOM	808	CB	ASP	A	227	65.324	28.359	23.253	1.00	40.17	C
ATOM	809	CG	ASP	A	227	64.883	27.591	22.013	1.00	39.66	C
ATOM	810	OD1	ASP	A	227	65.540	26.598	21.635	1.00	39.52	O
ATOM	811	OD2	ASP	A	227	63.851	27.975	21.424	1.00	39.07	O
ATOM	812	N	SER	A	228	66.778	26.328	24.705	1.00	42.36	N
ATOM	813	CA	SER	A	228	67.190	24.979	25.098	1.00	43.39	C
ATOM	814	C	SER	A	228	67.033	23.945	23.981	1.00	44.03	C
ATOM	815	O	SER	A	228	67.660	22.884	24.022	1.00	44.51	O
ATOM	816	CB	SER	A	228	66.398	24.526	26.328	1.00	43.24	C
ATOM	817	OG	SER	A	228	65.008	24.504	26.053	1.00	43.57	O
ATOM	818	N	GLN	A	229	66.199	24.255	22.993	1.00	44.53	N
ATOM	819	CA	GLN	A	229	65.970	23.361	21.861	1.00	45.10	C
ATOM	820	C	GLN	A	229	66.852	23.748	20.676	1.00	44.98	C
ATOM	821	O	GLN	A	229	66.675	23.241	19.568	1.00	44.97	O
ATOM	822	CB	GLN	A	229	64.497	23.407	21.431	1.00	45.98	C
ATOM	823	CG	GLN	A	229	63.517	22.870	22.464	1.00	47.38	C
ATOM	824	CD	GLN	A	229	62.069	22.994	22.014	1.00	48.68	C
ATOM	825	OE1	GLN	A	229	61.684	22.476	20.962	1.00	49.59	O
ATOM	826	NE2	GLN	A	229	61.259	23.683	22.810	1.00	49.07	N
ATOM	827	N	LYS	A	230	67.793	24.657	20.919	1.00	44.98	N
ATOM	828	CA	LYS	A	230	68.717	25.136	19.893	1.00	44.38	C
ATOM	829	C	LYS	A	230	68.072	25.967	18.788	1.00	43.28	C
ATOM	830	O	LYS	A	230	68.639	26.116	17.708	1.00	43.52	O
ATOM	831	CB	LYS	A	230	69.486	23.961	19.274	1.00	45.73	C
ATOM	832	CG	LYS	A	230	70.609	23.431	20.158	1.00	47.31	C
ATOM	833	CD	LYS	A	230	71.619	24.538	20.461	1.00	49.00	C
ATOM	834	CE	LYS	A	230	72.772	24.046	21.334	1.00	50.10	C
ATOM	835	NZ	LYS	A	230	73.732	25.151	21.659	1.00	50.80	N
ATOM	836	N	ARG	A	231	66.891	26.512	19.054	1.00	42.16	N

TABLE 5

ATOM	837	CA	ARG A 231	66.206	27.344	18.068	1.00	41.22	C
ATOM	838	C	ARG A 231	66.596	28.797	18.324	1.00	40.06	C
ATOM	839	O	ARG A 231	66.782	29.199	19.474	1.00	39.86	O
ATOM	840	CB	ARG A 231	64.687	27.189	18.194	1.00	42.00	C
ATOM	841	CG	ARG A 231	64.195	25.742	18.119	1.00	43.23	C
ATOM	842	CD	ARG A 231	62.693	25.651	18.341	1.00	44.06	C
ATOM	843	NE	ARG A 231	62.304	26.202	19.636	1.00	45.39	N
ATOM	844	CZ	ARG A 231	61.047	26.309	20.058	1.00	46.06	C
ATOM	845	NH1	ARG A 231	60.047	25.900	19.287	1.00	46.08	N
ATOM	846	NH2	ARG A 231	60.787	26.833	21.251	1.00	46.43	N
ATOM	847	N	TYR A 232	66.730	29.578	17.256	1.00	38.48	N
ATOM	848	CA	TYR A 232	67.093	30.985	17.390	1.00	37.00	C
ATOM	849	C	TYR A 232	66.068	31.733	18.236	1.00	35.83	C
ATOM	850	O	TYR A 232	64.867	31.475	18.154	1.00	35.57	O
ATOM	851	CB	TYR A 232	67.183	31.656	16.015	1.00	37.19	C
ATOM	852	CG	TYR A 232	68.311	31.153	15.143	1.00	37.51	C
ATOM	853	CD1	TYR A 232	69.633	31.195	15.585	1.00	37.61	C
ATOM	854	CD2	TYR A 232	68.058	30.636	13.872	1.00	37.62	C
ATOM	855	CE1	TYR A 232	70.679	30.730	14.782	1.00	37.95	C
ATOM	856	CE2	TYR A 232	69.097	30.171	13.060	1.00	37.82	C
ATOM	857	CZ	TYR A 232	70.400	30.219	13.521	1.00	38.06	C
ATOM	858	OH	TYR A 232	71.422	29.752	12.729	1.00	38.65	O
ATOM	859	N	LEU A 233	66.547	32.654	19.061	1.00	34.40	N
ATOM	860	CA	LEU A 233	65.653	33.447	19.887	1.00	33.28	C
ATOM	861	C	LEU A 233	65.058	34.541	19.015	1.00	32.48	C
ATOM	862	O	LEU A 233	65.681	34.992	18.053	1.00	32.36	O
ATOM	863	CB	LEU A 233	66.418	34.080	21.057	1.00	33.73	C
ATOM	864	CG	LEU A 233	66.128	33.504	22.449	1.00	34.07	C
ATOM	865	CD1	LEU A 233	66.374	32.010	22.441	1.00	33.66	C
ATOM	866	CD2	LEU A 233	66.994	34.190	23.496	1.00	34.12	C
ATOM	867	N	VAL A 234	63.842	34.958	19.335	1.00	31.40	N
ATOM	868	CA	VAL A 234	63.210	36.020	18.574	1.00	30.69	C
ATOM	869	C	VAL A 234	62.213	36.752	19.447	1.00	30.26	C
ATOM	870	O	VAL A 234	61.584	36.156	20.319	1.00	30.17	O
ATOM	871	CB	VAL A 234	62.488	35.479	17.321	1.00	30.52	C
ATOM	872	CG1	VAL A 234	61.272	34.654	17.719	1.00	30.18	C
ATOM	873	CG2	VAL A 234	62.083	36.636	16.434	1.00	30.21	C
ATOM	874	N	GLY A 235	62.087	38.052	19.218	1.00	30.07	N
ATOM	875	CA	GLY A 235	61.158	38.851	19.987	1.00	29.43	C
ATOM	876	C	GLY A 235	60.039	39.341	19.095	1.00	29.31	C
ATOM	877	O	GLY A 235	60.105	39.201	17.874	1.00	29.17	O
ATOM	878	N	ALA A 236	59.011	39.922	19.699	1.00	28.71	N
ATOM	879	CA	ALA A 236	57.888	40.420	18.929	1.00	28.71	C
ATOM	880	C	ALA A 236	57.267	41.637	19.600	1.00	28.78	C
ATOM	881	O	ALA A 236	57.035	41.643	20.809	1.00	28.79	O
ATOM	882	CB	ALA A 236	56.846	39.320	18.768	1.00	28.81	C
ATOM	883	N	GLY A 237	57.007	42.670	18.809	1.00	28.64	N
ATOM	884	CA	GLY A 237	56.405	43.866	19.355	1.00	28.99	C
ATOM	885	C	GLY A 237	54.902	43.715	19.462	1.00	29.51	C
ATOM	886	O	GLY A 237	54.284	43.014	18.657	1.00	29.85	O
ATOM	887	N	ILE A 238	54.311	44.352	20.467	1.00	29.44	N
ATOM	888	CA	ILE A 238	52.866	44.301	20.649	1.00	29.75	C
ATOM	889	C	ILE A 238	52.370	45.707	20.959	1.00	30.10	C
ATOM	890	O	ILE A 238	53.150	46.580	21.332	1.00	29.88	O
ATOM	891	CB	ILE A 238	52.449	43.359	21.814	1.00	29.59	C
ATOM	892	CG1	ILE A 238	52.950	43.912	23.151	1.00	29.43	C
ATOM	893	CG2	ILE A 238	53.001	41.964	21.578	1.00	29.87	C

TABLE 5

ATOM	894	CD1	ILE	A	238	52.438	43.149	24.376	1.00	28.69	C
ATOM	895	N	ASN	A	239	51.072	45.925	20.789	1.00	30.32	N
ATOM	896	CA	ASN	A	239	50.488	47.224	21.067	1.00	30.41	C
ATOM	897	C	ASN	A	239	49.515	47.095	22.233	1.00	30.69	C
ATOM	898	O	ASN	A	239	49.107	45.992	22.599	1.00	30.13	O
ATOM	899	CB	ASN	A	239	49.774	47.760	19.822	1.00	30.86	C
ATOM	900	CG	ASN	A	239	48.606	46.892	19.397	1.00	30.89	C
ATOM	901	OD1	ASN	A	239	47.610	46.785	20.108	1.00	30.90	O
ATOM	902	ND2	ASN	A	239	48.724	46.269	18.231	1.00	31.26	N
ATOM	903	N	THR	A	240	49.144	48.226	22.816	1.00	31.46	N
ATOM	904	CA	THR	A	240	48.236	48.229	23.953	1.00	32.48	C
ATOM	905	C	THR	A	240	46.760	48.143	23.557	1.00	33.71	C
ATOM	906	O	THR	A	240	45.885	48.393	24.383	1.00	33.65	O
ATOM	907	CB	THR	A	240	48.448	49.491	24.792	1.00	32.03	C
ATOM	908	OG1	THR	A	240	48.264	50.635	23.957	1.00	31.61	O
ATOM	909	CG2	THR	A	240	49.862	49.526	25.366	1.00	31.27	C
ATOM	910	N	ARG	A	241	46.484	47.782	22.305	1.00	34.92	N
ATOM	911	CA	ARG	A	241	45.100	47.680	21.837	1.00	36.67	C
ATOM	912	C	ARG	A	241	44.578	46.259	21.614	1.00	36.73	C
ATOM	913	O	ARG	A	241	43.619	45.848	22.262	1.00	36.77	O
ATOM	914	CB	ARG	A	241	44.909	48.494	20.552	1.00	37.87	C
ATOM	915	CG	ARG	A	241	44.891	50.010	20.755	1.00	40.48	C
ATOM	916	CD	ARG	A	241	44.875	50.729	19.409	1.00	42.72	C
ATOM	917	NE	ARG	A	241	44.876	52.188	19.522	1.00	44.49	N
ATOM	918	CZ	ARG	A	241	43.818	52.916	19.866	1.00	45.58	C
ATOM	919	NH1	ARG	A	241	42.661	52.325	20.140	1.00	46.47	N
ATOM	920	NH2	ARG	A	241	43.909	54.239	19.912	1.00	45.69	N
ATOM	921	N	ASP	A	242	45.202	45.505	20.713	1.00	36.96	N
ATOM	922	CA	ASP	A	242	44.732	44.148	20.424	1.00	37.70	C
ATOM	923	C	ASP	A	242	45.537	43.008	21.051	1.00	37.72	C
ATOM	924	O	ASP	A	242	45.525	41.888	20.540	1.00	38.14	O
ATOM	925	CB	ASP	A	242	44.663	43.927	18.904	1.00	37.89	C
ATOM	926	CG	ASP	A	242	46.025	44.024	18.225	1.00	38.50	C
ATOM	927	OD1	ASP	A	242	47.055	43.712	18.866	1.00	38.41	O
ATOM	928	OD2	ASP	A	242	46.066	44.394	17.029	1.00	38.58	O
ATOM	929	N	PHE	A	243	46.210	43.287	22.163	1.00	37.60	N
ATOM	930	CA	PHE	A	243	47.043	42.293	22.838	1.00	37.44	C
ATOM	931	C	PHE	A	243	46.355	41.022	23.339	1.00	37.84	C
ATOM	932	O	PHE	A	243	46.992	39.970	23.425	1.00	37.47	O
ATOM	933	CB	PHE	A	243	47.796	42.957	23.996	1.00	36.54	C
ATOM	934	CG	PHE	A	243	46.903	43.587	25.022	1.00	35.45	C
ATOM	935	CD1	PHE	A	243	46.382	42.833	26.066	1.00	35.41	C
ATOM	936	CD2	PHE	A	243	46.594	44.940	24.955	1.00	35.12	C
ATOM	937	CE1	PHE	A	243	45.566	43.416	27.033	1.00	34.98	C
ATOM	938	CE2	PHE	A	243	45.780	45.534	25.916	1.00	35.22	C
ATOM	939	CZ	PHE	A	243	45.265	44.769	26.959	1.00	35.05	C
ATOM	940	N	ARG	A	244	45.072	41.114	23.675	1.00	38.36	N
ATOM	941	CA	ARG	A	244	44.337	39.949	24.163	1.00	38.96	C
ATOM	942	C	ARG	A	244	44.291	38.857	23.099	1.00	39.31	C
ATOM	943	O	ARG	A	244	44.140	37.676	23.413	1.00	39.37	O
ATOM	944	CB	ARG	A	244	42.913	40.340	24.579	1.00	38.87	C
ATOM	945	CG	ARG	A	244	42.863	41.345	25.722	1.00	38.92	C
ATOM	946	CD	ARG	A	244	41.440	41.607	26.189	1.00	38.85	C
ATOM	947	NE	ARG	A	244	41.389	42.595	27.267	1.00	39.27	N
ATOM	948	CZ	ARG	A	244	41.572	43.902	27.095	1.00	39.54	C
ATOM	949	NH1	ARG	A	244	41.816	44.388	25.885	1.00	39.23	N
ATOM	950	NH2	ARG	A	244	41.510	44.725	28.135	1.00	39.60	N

TABLE 5

ATOM	951	N	GLU	A	245	44.422	39.257	21.839	1.00	39.62	N
ATOM	952	CA	GLU	A	245	44.413	38.300	20.742	1.00	39.94	C
ATOM	953	C	GLU	A	245	45.822	38.091	20.183	1.00	39.41	C
ATOM	954	O	GLU	A	245	46.214	36.965	19.873	1.00	39.17	O
ATOM	955	CB	GLU	A	245	43.477	38.772	19.618	1.00	41.18	C
ATOM	956	CG	GLU	A	245	41.987	38.670	19.955	1.00	43.82	C
ATOM	957	CD	GLU	A	245	41.479	39.800	20.848	1.00	45.62	C
ATOM	958	OE1	GLU	A	245	40.433	39.604	21.510	1.00	46.25	O
ATOM	959	OE2	GLU	A	245	42.105	40.889	20.881	1.00	46.89	O
ATOM	960	N	ARG	A	246	46.584	39.177	20.067	1.00	38.53	N
ATOM	961	CA	ARG	A	246	47.940	39.103	19.528	1.00	37.66	C
ATOM	962	C	ARG	A	246	48.908	38.320	20.415	1.00	37.14	C
ATOM	963	O	ARG	A	246	49.651	37.469	19.931	1.00	37.14	O
ATOM	964	CB	ARG	A	246	48.490	40.516	19.287	1.00	36.94	C
ATOM	965	CG	ARG	A	246	49.819	40.546	18.536	1.00	36.46	C
ATOM	966	CD	ARG	A	246	50.278	41.970	18.276	1.00	35.96	C
ATOM	967	NE	ARG	A	246	49.341	42.724	17.441	1.00	35.46	N
ATOM	968	CZ	ARG	A	246	49.311	42.687	16.111	1.00	35.16	C
ATOM	969	NH1	ARG	A	246	50.170	41.932	15.441	1.00	34.77	N
ATOM	970	NH2	ARG	A	246	48.421	43.417	15.448	1.00	35.59	N
ATOM	971	N	VAL	A	247	48.896	38.599	21.714	1.00	36.70	N
ATOM	972	CA	VAL	A	247	49.802	37.919	22.630	1.00	36.48	C
ATOM	973	C	VAL	A	247	49.701	36.389	22.572	1.00	36.82	C
ATOM	974	O	VAL	A	247	50.702	35.710	22.328	1.00	36.60	O
ATOM	975	CB	VAL	A	247	49.589	38.404	24.087	1.00	35.99	C
ATOM	976	CG1	VAL	A	247	50.425	37.578	25.042	1.00	35.65	C
ATOM	977	CG2	VAL	A	247	49.969	39.877	24.202	1.00	35.85	C
ATOM	978	N	PRO	A	248	48.497	35.824	22.800	1.00	36.88	N
ATOM	979	CA	PRO	A	248	48.355	34.363	22.756	1.00	36.60	C
ATOM	980	C	PRO	A	248	48.891	33.775	21.453	1.00	36.20	C
ATOM	981	O	PRO	A	248	49.538	32.729	21.450	1.00	36.15	O
ATOM	982	CB	PRO	A	248	46.850	34.163	22.920	1.00	36.98	C
ATOM	983	CG	PRO	A	248	46.469	35.306	23.823	1.00	36.81	C
ATOM	984	CD	PRO	A	248	47.223	36.459	23.192	1.00	36.48	C
ATOM	985	N	ALA	A	249	48.626	34.465	20.349	1.00	36.16	N
ATOM	986	CA	ALA	A	249	49.087	34.025	19.042	1.00	36.32	C
ATOM	987	C	ALA	A	249	50.613	34.043	19.000	1.00	36.64	C
ATOM	988	O	ALA	A	249	51.242	33.137	18.444	1.00	36.51	O
ATOM	989	CB	ALA	A	249	48.517	34.931	17.959	1.00	36.44	C
ATOM	990	N	LEU	A	250	51.206	35.076	19.596	1.00	36.66	N
ATOM	991	CA	LEU	A	250	52.660	35.202	19.629	1.00	36.66	C
ATOM	992	C	LEU	A	250	53.284	34.148	20.540	1.00	36.79	C
ATOM	993	O	LEU	A	250	54.328	33.586	20.222	1.00	36.30	O
ATOM	994	CB	LEU	A	250	53.062	36.610	20.090	1.00	36.33	C
ATOM	995	CG	LEU	A	250	53.366	37.679	19.026	1.00	36.54	C
ATOM	996	CD1	LEU	A	250	52.849	37.266	17.658	1.00	36.13	C
ATOM	997	CD2	LEU	A	250	52.757	39.002	19.461	1.00	35.88	C
ATOM	998	N	VAL	A	251	52.644	33.878	21.671	1.00	37.78	N
ATOM	999	CA	VAL	A	251	53.166	32.875	22.593	1.00	39.09	C
ATOM	1000	C	VAL	A	251	53.103	31.507	21.928	1.00	39.91	C
ATOM	1001	O	VAL	A	251	54.069	30.745	21.961	1.00	40.18	O
ATOM	1002	CB	VAL	A	251	52.358	32.829	23.907	1.00	38.94	C
ATOM	1003	CG1	VAL	A	251	52.815	31.651	24.761	1.00	39.25	C
ATOM	1004	CG2	VAL	A	251	52.545	34.126	24.674	1.00	39.03	C
ATOM	1005	N	GLU	A	252	51.963	31.200	21.317	1.00	40.90	N
ATOM	1006	CA	GLU	A	252	51.794	29.918	20.642	1.00	41.65	C
ATOM	1007	C	GLU	A	252	52.801	29.762	19.504	1.00	40.64	C

TABLE 5

ATOM	1008	O	GLU A 252	53.293	28.666	19.251	1.00	40.83	O
ATOM	1009	CB	GLU A 252	50.370	29.784	20.095	1.00	43.45	C
ATOM	1010	CG	GLU A 252	49.477	28.839	20.889	1.00	46.51	C
ATOM	1011	CD	GLU A 252	49.239	29.298	22.318	1.00	48.31	C
ATOM	1012	OE1	GLU A 252	48.600	30.359	22.512	1.00	49.25	O
ATOM	1013	OE2	GLU A 252	49.691	28.589	23.249	1.00	49.10	O
ATOM	1014	N	ALA A 253	53.103	30.864	18.822	1.00	39.42	N
ATOM	1015	CA	ALA A 253	54.051	30.844	17.714	1.00	38.09	C
ATOM	1016	C	ALA A 253	55.488	30.617	18.189	1.00	37.51	C
ATOM	1017	O	ALA A 253	56.377	30.344	17.380	1.00	37.32	O
ATOM	1018	CB	ALA A 253	53.961	32.137	16.931	1.00	37.90	C
ATOM	1019	N	GLY A 254	55.715	30.740	19.495	1.00	36.62	N
ATOM	1020	CA	GLY A 254	57.048	30.521	20.033	1.00	35.88	C
ATOM	1021	C	GLY A 254	57.879	31.754	20.366	1.00	35.36	C
ATOM	1022	O	GLY A 254	59.072	31.632	20.651	1.00	34.95	O
ATOM	1023	N	ALA A 255	57.270	32.938	20.330	1.00	34.50	N
ATOM	1024	CA	ALA A 255	57.994	34.166	20.649	1.00	33.48	C
ATOM	1025	C	ALA A 255	58.659	34.025	22.019	1.00	32.88	C
ATOM	1026	O	ALA A 255	58.016	33.663	23.000	1.00	32.47	O
ATOM	1027	CB	ALA A 255	57.039	35.352	20.644	1.00	33.55	C
ATOM	1028	N	ASP A 256	59.954	34.309	22.079	1.00	32.31	N
ATOM	1029	CA	ASP A 256	60.703	34.185	23.323	1.00	31.81	C
ATOM	1030	C	ASP A 256	60.518	35.367	24.266	1.00	31.12	C
ATOM	1031	O	ASP A 256	60.649	35.232	25.481	1.00	30.65	O
ATOM	1032	CB	ASP A 256	62.181	33.994	22.999	1.00	31.98	C
ATOM	1033	CG	ASP A 256	62.425	32.745	22.182	1.00	32.65	C
ATOM	1034	OD1	ASP A 256	62.295	31.643	22.749	1.00	33.20	O
ATOM	1035	OD2	ASP A 256	62.725	32.860	20.975	1.00	32.82	O
ATOM	1036	N	VAL A 257	60.211	36.526	23.700	1.00	30.48	N
ATOM	1037	CA	VAL A 257	60.007	37.722	24.500	1.00	29.85	C
ATOM	1038	C	VAL A 257	59.153	38.696	23.708	1.00	29.52	C
ATOM	1039	O	VAL A 257	59.158	38.683	22.477	1.00	29.18	O
ATOM	1040	CB	VAL A 257	61.359	38.398	24.867	1.00	29.74	C
ATOM	1041	CG1	VAL A 257	62.118	38.768	23.603	1.00	29.96	C
ATOM	1042	CG2	VAL A 257	61.116	39.636	25.721	1.00	29.25	C
ATOM	1043	N	LEU A 258	58.410	39.530	24.422	1.00	28.83	N
ATOM	1044	CA	LEU A 258	57.556	40.513	23.785	1.00	28.70	C
ATOM	1045	C	LEU A 258	57.993	41.899	24.238	1.00	28.49	C
ATOM	1046	O	LEU A 258	58.752	42.041	25.198	1.00	28.65	O
ATOM	1047	CB	LEU A 258	56.094	40.289	24.189	1.00	28.62	C
ATOM	1048	CG	LEU A 258	55.534	38.871	24.065	1.00	29.10	C
ATOM	1049	CD1	LEU A 258	54.122	38.855	24.605	1.00	29.34	C
ATOM	1050	CD2	LEU A 258	55.573	38.407	22.610	1.00	29.01	C
ATOM	1051	N	CYS A 259	57.527	42.920	23.535	1.00	27.96	N
ATOM	1052	CA	CYS A 259	57.840	44.286	23.914	1.00	27.94	C
ATOM	1053	C	CYS A 259	56.759	45.216	23.403	1.00	27.70	C
ATOM	1054	O	CYS A 259	56.475	45.257	22.209	1.00	27.35	O
ATOM	1055	CB	CYS A 259	59.198	44.730	23.358	1.00	27.38	C
ATOM	1056	SG	CYS A 259	59.725	46.331	24.021	1.00	26.82	S
ATOM	1057	N	ILE A 260	56.143	45.950	24.320	1.00	28.21	N
ATOM	1058	CA	ILE A 260	55.108	46.898	23.943	1.00	28.49	C
ATOM	1059	C	ILE A 260	55.815	48.001	23.168	1.00	29.26	C
ATOM	1060	O	ILE A 260	56.769	48.615	23.657	1.00	28.86	O
ATOM	1061	CB	ILE A 260	54.421	47.483	25.182	1.00	28.21	C
ATOM	1062	CG1	ILE A 260	53.792	46.346	25.994	1.00	27.85	C
ATOM	1063	CG2	ILE A 260	53.373	48.510	24.761	1.00	27.76	C
ATOM	1064	CD1	ILE A 260	53.275	46.763	27.351	1.00	27.51	C



TABLE 5

ATOM	1065	N	ASP	A	261	55.344	48.233	21.951	1.00	29.87	N
ATOM	1066	CA	ASP	A	261	55.920	49.224	21.062	1.00	30.69	C
ATOM	1067	C	ASP	A	261	55.160	50.552	21.108	1.00	31.35	C
ATOM	1068	O	ASP	A	261	54.046	50.659	20.597	1.00	31.90	O
ATOM	1069	CB	ASP	A	261	55.934	48.632	19.651	1.00	31.21	C
ATOM	1070	CG	ASP	A	261	56.417	49.603	18.599	1.00	31.62	C
ATOM	1071	OD1	ASP	A	261	57.220	50.508	18.913	1.00	31.79	O
ATOM	1072	OD2	ASP	A	261	55.997	49.438	17.437	1.00	32.40	O
ATOM	1073	N	SER	A	262	55.767	51.562	21.727	1.00	31.57	N
ATOM	1074	CA	SER	A	262	55.136	52.876	21.843	1.00	32.25	C
ATOM	1075	C	SER	A	262	56.162	53.984	22.056	1.00	32.15	C
ATOM	1076	O	SER	A	262	57.250	53.730	22.574	1.00	32.40	O
ATOM	1077	CB	SER	A	262	54.146	52.871	23.012	1.00	32.42	C
ATOM	1078	OG	SER	A	262	53.637	54.171	23.261	1.00	33.43	O
ATOM	1079	N	SER	A	263	55.818	55.212	21.665	1.00	31.88	N
ATOM	1080	CA	SER	A	263	56.734	56.331	21.847	1.00	31.98	C
ATOM	1081	C	SER	A	263	56.658	56.839	23.280	1.00	31.45	C
ATOM	1082	O	SER	A	263	57.683	57.118	23.898	1.00	32.24	O
ATOM	1083	CB	SER	A	263	56.433	57.465	20.859	1.00	32.64	C
ATOM	1084	OG	SER	A	263	55.121	57.971	20.999	1.00	35.89	O
ATOM	1085	N	ASP	A	264	55.447	56.941	23.814	1.00	30.33	N
ATOM	1086	CA	ASP	A	264	55.253	57.394	25.189	1.00	29.38	C
ATOM	1087	C	ASP	A	264	54.694	56.241	26.026	1.00	28.76	C
ATOM	1088	O	ASP	A	264	53.481	56.036	26.093	1.00	28.66	O
ATOM	1089	CB	ASP	A	264	54.298	58.597	25.215	1.00	29.24	C
ATOM	1090	CG	ASP	A	264	53.927	59.037	26.632	1.00	29.06	C
ATOM	1091	OD1	ASP	A	264	54.618	58.666	27.606	1.00	28.24	O
ATOM	1092	OD2	ASP	A	264	52.935	59.780	26.763	1.00	28.61	O
ATOM	1093	N	GLY	A	265	55.594	55.497	26.664	1.00	27.72	N
ATOM	1094	CA	GLY	A	265	55.194	54.358	27.474	1.00	26.80	C
ATOM	1095	C	GLY	A	265	54.724	54.700	28.874	1.00	26.32	C
ATOM	1096	O	GLY	A	265	54.304	53.815	29.622	1.00	25.26	O
ATOM	1097	N	PHE	A	266	54.800	55.978	29.238	1.00	26.32	N
ATOM	1098	CA	PHE	A	266	54.358	56.418	30.555	1.00	26.48	C
ATOM	1099	C	PHE	A	266	52.841	56.551	30.402	1.00	27.26	C
ATOM	1100	O	PHE	A	266	52.277	57.642	30.427	1.00	26.89	O
ATOM	1101	CB	PHE	A	266	55.000	57.764	30.903	1.00	26.26	C
ATOM	1102	CG	PHE	A	266	55.074	58.045	32.388	1.00	26.33	C
ATOM	1103	CD1	PHE	A	266	54.336	57.289	33.301	1.00	25.12	C
ATOM	1104	CD2	PHE	A	266	55.866	59.089	32.867	1.00	25.66	C
ATOM	1105	CE1	PHE	A	266	54.385	57.569	34.664	1.00	25.49	C
ATOM	1106	CE2	PHE	A	266	55.922	59.378	34.228	1.00	24.95	C
ATOM	1107	CZ	PHE	A	266	55.179	58.617	35.131	1.00	25.18	C
ATOM	1108	N	SER	A	267	52.195	55.403	30.239	1.00	28.41	N
ATOM	1109	CA	SER	A	267	50.764	55.334	30.010	1.00	29.17	C
ATOM	1110	C	SER	A	267	50.084	54.224	30.791	1.00	29.72	C
ATOM	1111	O	SER	A	267	50.659	53.155	31.012	1.00	29.22	O
ATOM	1112	CB	SER	A	267	50.515	55.112	28.521	1.00	29.55	C
ATOM	1113	OG	SER	A	267	49.162	54.792	28.269	1.00	31.97	O
ATOM	1114	N	GLU	A	268	48.844	54.482	31.188	1.00	30.02	N
ATOM	1115	CA	GLU	A	268	48.072	53.506	31.927	1.00	31.13	C
ATOM	1116	C	GLU	A	268	47.767	52.325	31.005	1.00	31.03	C
ATOM	1117	O	GLU	A	268	47.618	51.195	31.462	1.00	30.56	O
ATOM	1118	CB	GLU	A	268	46.775	54.139	32.437	1.00	32.14	C
ATOM	1119	CG	GLU	A	268	45.961	53.213	33.322	1.00	34.23	C
ATOM	1120	CD	GLU	A	268	44.724	53.872	33.902	1.00	35.72	C
ATOM	1121	OE1	GLU	A	268	43.933	53.148	34.551	1.00	36.93	O

TABLE 5

ATOM	1122	OE2	GLU	A	268	44.542	55.099	33.717	1.00	35.59	O
ATOM	1123	N	TRP	A	269	47.688	52.592	29.703	1.00	31.57	N
ATOM	1124	CA	TRP	A	269	47.414	51.539	28.730	1.00	32.18	C
ATOM	1125	C	TRP	A	269	48.488	50.453	28.800	1.00	32.07	C
ATOM	1126	O	TRP	A	269	48.194	49.266	28.661	1.00	32.37	O
ATOM	1127	CB	TRP	A	269	47.347	52.109	27.309	1.00	32.84	C
ATOM	1128	CG	TRP	A	269	46.211	53.064	27.085	1.00	34.12	C
ATOM	1129	CD1	TRP	A	269	46.306	54.401	26.827	1.00	34.63	C
ATOM	1130	CD2	TRP	A	269	44.807	52.761	27.114	1.00	34.88	C
ATOM	1131	NE1	TRP	A	269	45.051	54.950	26.694	1.00	35.25	N
ATOM	1132	CE2	TRP	A	269	44.114	53.966	26.866	1.00	34.78	C
ATOM	1133	CE3	TRP	A	269	44.068	51.587	27.325	1.00	35.27	C
ATOM	1134	CZ2	TRP	A	269	42.717	54.035	26.823	1.00	35.56	C
ATOM	1135	CZ3	TRP	A	269	42.675	51.655	27.284	1.00	35.55	C
ATOM	1136	CH2	TRP	A	269	42.017	52.872	27.035	1.00	35.57	C
ATOM	1137	N	GLN	A	270	49.736	50.855	29.013	1.00	31.69	N
ATOM	1138	CA	GLN	A	270	50.808	49.875	29.114	1.00	31.74	C
ATOM	1139	C	GLN	A	270	50.720	49.115	30.430	1.00	31.80	C
ATOM	1140	O	GLN	A	270	51.002	47.916	30.480	1.00	32.05	O
ATOM	1141	CB	GLN	A	270	52.179	50.544	28.965	1.00	30.95	C
ATOM	1142	CG	GLN	A	270	52.461	50.929	27.526	1.00	30.42	C
ATOM	1143	CD	GLN	A	270	53.936	50.960	27.191	1.00	29.71	C
ATOM	1144	OE1	GLN	A	270	54.755	50.317	27.851	1.00	28.19	O
ATOM	1145	NE2	GLN	A	270	54.278	51.691	26.141	1.00	28.75	N
ATOM	1146	N	LYS	A	271	50.325	49.803	31.495	1.00	31.92	N
ATOM	1147	CA	LYS	A	271	50.192	49.138	32.781	1.00	32.22	C
ATOM	1148	C	LYS	A	271	49.114	48.065	32.643	1.00	31.72	C
ATOM	1149	O	LYS	A	271	49.265	46.949	33.135	1.00	31.50	O
ATOM	1150	CB	LYS	A	271	49.795	50.131	33.872	1.00	32.96	C
ATOM	1151	CG	LYS	A	271	49.476	49.448	35.190	1.00	34.60	C
ATOM	1152	CD	LYS	A	271	49.184	50.433	36.301	1.00	36.08	C
ATOM	1153	CE	LYS	A	271	48.928	49.688	37.605	1.00	37.48	C
ATOM	1154	NZ	LYS	A	271	48.792	50.615	38.769	1.00	39.24	N
ATOM	1155	N	ILE	A	272	48.031	48.421	31.959	1.00	31.65	N
ATOM	1156	CA	ILE	A	272	46.919	47.511	31.733	1.00	31.59	C
ATOM	1157	C	ILE	A	272	47.351	46.309	30.904	1.00	31.68	C
ATOM	1158	O	ILE	A	272	46.967	45.182	31.203	1.00	31.84	O
ATOM	1159	CB	ILE	A	272	45.751	48.232	31.025	1.00	31.59	C
ATOM	1160	CG1	ILE	A	272	45.058	49.167	32.018	1.00	30.96	C
ATOM	1161	CG2	ILE	A	272	44.761	47.214	30.452	1.00	31.15	C
ATOM	1162	CD1	ILE	A	272	44.109	50.157	31.367	1.00	30.73	C
ATOM	1163	N	THR	A	273	48.151	46.548	29.869	1.00	31.76	N
ATOM	1164	CA	THR	A	273	48.634	45.465	29.015	1.00	31.96	C
ATOM	1165	C	THR	A	273	49.536	44.497	29.788	1.00	32.26	C
ATOM	1166	O	THR	A	273	49.374	43.280	29.695	1.00	32.32	O
ATOM	1167	CB	THR	A	273	49.406	46.020	27.806	1.00	32.10	C
ATOM	1168	OG1	THR	A	273	48.522	46.813	27.004	1.00	32.10	O
ATOM	1169	CG2	THR	A	273	49.970	44.890	26.960	1.00	32.28	C
ATOM	1170	N	ILE	A	274	50.487	45.030	30.548	1.00	32.22	N
ATOM	1171	CA	ILE	A	274	51.377	44.176	31.328	1.00	32.21	C
ATOM	1172	C	ILE	A	274	50.558	43.401	32.366	1.00	32.57	C
ATOM	1173	O	ILE	A	274	50.783	42.212	32.590	1.00	32.28	O
ATOM	1174	CB	ILE	A	274	52.445	44.999	32.071	1.00	31.88	C
ATOM	1175	CG1	ILE	A	274	53.279	45.802	31.070	1.00	31.35	C
ATOM	1176	CG2	ILE	A	274	53.332	44.068	32.899	1.00	31.40	C
ATOM	1177	CD1	ILE	A	274	54.276	46.749	31.724	1.00	31.35	C
ATOM	1178	N	GLY	A	275	49.610	44.089	32.994	1.00	32.79	N

TABLE 5

ATOM	1179	CA	GLY A 275	48.772	43.454	33.994	1.00	33.65	C
ATOM	1180	C	GLY A 275	47.998	42.274	33.438	1.00	33.76	C
ATOM	1181	O	GLY A 275	47.845	41.251	34.103	1.00	34.32	O
ATOM	1182	N	TRP A 276	47.505	42.412	32.214	1.00	33.77	N
ATOM	1183	CA	TRP A 276	46.752	41.341	31.580	1.00	34.23	C
ATOM	1184	C	TRP A 276	47.677	40.152	31.331	1.00	34.65	C
ATOM	1185	O	TRP A 276	47.293	39.001	31.536	1.00	34.89	O
ATOM	1186	CB	TRP A 276	46.163	41.821	30.253	1.00	34.33	C
ATOM	1187	CG	TRP A 276	45.278	40.809	29.591	1.00	34.90	C
ATOM	1188	CD1	TRP A 276	43.932	40.639	29.784	1.00	34.76	C
ATOM	1189	CD2	TRP A 276	45.675	39.817	28.635	1.00	34.98	C
ATOM	1190	NE1	TRP A 276	43.469	39.604	29.003	1.00	34.35	N
ATOM	1191	CE2	TRP A 276	44.516	39.082	28.289	1.00	34.87	C
ATOM	1192	CE3	TRP A 276	46.898	39.476	28.038	1.00	35.16	C
ATOM	1193	CZ2	TRP A 276	44.545	38.026	27.368	1.00	35.33	C
ATOM	1194	CZ3	TRP A 276	46.927	38.425	27.122	1.00	35.14	C
ATOM	1195	CH2	TRP A 276	45.755	37.713	26.797	1.00	35.58	C
ATOM	1196	N	ILE A 277	48.900	40.435	30.890	1.00	34.66	N
ATOM	1197	CA	ILE A 277	49.868	39.381	30.620	1.00	34.37	C
ATOM	1198	C	ILE A 277	50.227	38.622	31.900	1.00	35.02	C
ATOM	1199	O	ILE A 277	50.350	37.399	31.891	1.00	34.44	O
ATOM	1200	CB	ILE A 277	51.146	39.961	29.972	1.00	33.65	C
ATOM	1201	CG1	ILE A 277	50.802	40.550	28.604	1.00	33.07	C
ATOM	1202	CG2	ILE A 277	52.206	38.877	29.823	1.00	32.69	C
ATOM	1203	CD1	ILE A 277	51.952	41.268	27.926	1.00	32.85	C
ATOM	1204	N	ARG A 278	50.390	39.346	33.001	1.00	36.08	N
ATOM	1205	CA	ARG A 278	50.722	38.713	34.275	1.00	37.93	C
ATOM	1206	C	ARG A 278	49.570	37.835	34.757	1.00	39.10	C
ATOM	1207	O	ARG A 278	49.778	36.704	35.192	1.00	39.55	O
ATOM	1208	CB	ARG A 278	51.037	39.774	35.334	1.00	37.11	C
ATOM	1209	CG	ARG A 278	52.342	40.499	35.106	1.00	36.58	C
ATOM	1210	CD	ARG A 278	53.533	39.574	35.306	1.00	36.31	C
ATOM	1211	NE	ARG A 278	54.770	40.224	34.883	1.00	35.73	N
ATOM	1212	CZ	ARG A 278	55.478	39.861	33.819	1.00	35.12	C
ATOM	1213	NH1	ARG A 278	55.079	38.840	33.072	1.00	33.98	N
ATOM	1214	NH2	ARG A 278	56.569	40.539	33.487	1.00	34.31	N
ATOM	1215	N	GLU A 279	48.356	38.367	34.669	1.00	40.86	N
ATOM	1216	CA	GLU A 279	47.157	37.654	35.089	1.00	42.25	C
ATOM	1217	C	GLU A 279	46.961	36.339	34.331	1.00	42.65	C
ATOM	1218	O	GLU A 279	46.500	35.352	34.900	1.00	42.50	O
ATOM	1219	CB	GLU A 279	45.931	38.556	34.894	1.00	43.71	C
ATOM	1220	CG	GLU A 279	44.582	37.864	35.074	1.00	46.30	C
ATOM	1221	CD	GLU A 279	43.398	38.825	34.946	1.00	48.03	C
ATOM	1222	OE1	GLU A 279	43.314	39.555	33.928	1.00	48.89	O
ATOM	1223	OE2	GLU A 279	42.544	38.844	35.863	1.00	48.40	O
ATOM	1224	N	LYS A 280	47.324	36.319	33.055	1.00	42.53	N
ATOM	1225	CA	LYS A 280	47.144	35.116	32.255	1.00	42.83	C
ATOM	1226	C	LYS A 280	48.356	34.188	32.182	1.00	42.50	C
ATOM	1227	O	LYS A 280	48.201	32.975	32.047	1.00	42.55	O
ATOM	1228	CB	LYS A 280	46.723	35.499	30.834	1.00	43.85	C
ATOM	1229	CG	LYS A 280	46.229	34.321	30.008	1.00	45.53	C
ATOM	1230	CD	LYS A 280	45.821	34.743	28.602	1.00	46.52	C
ATOM	1231	CE	LYS A 280	45.103	33.612	27.871	1.00	46.76	C
ATOM	1232	NZ	LYS A 280	45.916	32.367	27.837	1.00	47.35	N
ATOM	1233	N	TYR A 281	49.557	34.749	32.287	1.00	41.56	N
ATOM	1234	CA	TYR A 281	50.771	33.949	32.172	1.00	40.39	C
ATOM	1235	C	TYR A 281	51.738	34.039	33.341	1.00	40.00	C

TABLE 5

ATOM	1236	O	TYR	A	281	52.746	33.335	33.360	1.00	39.98	O
ATOM	1237	CB	TYR	A	281	51.530	34.355	30.910	1.00	40.02	C
ATOM	1238	CG	TYR	A	281	50.757	34.204	29.625	1.00	39.56	C
ATOM	1239	CD1	TYR	A	281	50.552	32.949	29.056	1.00	39.41	C
ATOM	1240	CD2	TYR	A	281	50.255	35.322	28.957	1.00	39.51	C
ATOM	1241	CE1	TYR	A	281	49.873	32.809	27.853	1.00	39.24	C
ATOM	1242	CE2	TYR	A	281	49.571	35.193	27.752	1.00	39.30	C
ATOM	1243	CZ	TYR	A	281	49.386	33.933	27.206	1.00	39.40	C
ATOM	1244	OH	TYR	A	281	48.722	33.794	26.012	1.00	39.81	O
ATOM	1245	N	GLY	A	282	51.444	34.892	34.313	1.00	39.64	N
ATOM	1246	CA	GLY	A	282	52.365	35.045	35.422	1.00	39.49	C
ATOM	1247	C	GLY	A	282	53.673	35.588	34.863	1.00	39.77	C
ATOM	1248	O	GLY	A	282	53.665	36.379	33.916	1.00	39.23	O
ATOM	1249	N	ASP	A	283	54.796	35.156	35.427	1.00	39.96	N
ATOM	1250	CA	ASP	A	283	56.105	35.611	34.968	1.00	40.22	C
ATOM	1251	C	ASP	A	283	56.709	34.682	33.916	1.00	39.77	C
ATOM	1252	O	ASP	A	283	57.905	34.745	33.638	1.00	40.01	O
ATOM	1253	CB	ASP	A	283	57.063	35.737	36.157	1.00	41.08	C
ATOM	1254	CG	ASP	A	283	56.660	36.845	37.118	1.00	42.76	C
ATOM	1255	OD1	ASP	A	283	56.621	38.024	36.696	1.00	43.36	O
ATOM	1256	OD2	ASP	A	283	56.381	36.541	38.300	1.00	43.92	O
ATOM	1257	N	LYS	A	284	55.882	33.825	33.328	1.00	39.38	N
ATOM	1258	CA	LYS	A	284	56.354	32.887	32.314	1.00	39.05	C
ATOM	1259	C	LYS	A	284	56.482	33.538	30.937	1.00	37.99	C
ATOM	1260	O	LYS	A	284	57.178	33.026	30.061	1.00	38.55	O
ATOM	1261	CB	LYS	A	284	55.416	31.678	32.234	1.00	40.57	C
ATOM	1262	CG	LYS	A	284	55.327	30.866	33.526	1.00	42.45	C
ATOM	1263	CD	LYS	A	284	56.686	30.300	33.930	1.00	44.18	C
ATOM	1264	CE	LYS	A	284	56.559	29.340	35.112	1.00	45.45	C
ATOM	1265	NZ	LYS	A	284	57.886	28.778	35.524	1.00	46.66	N
ATOM	1266	N	VAL	A	285	55.793	34.655	30.741	1.00	36.07	N
ATOM	1267	CA	VAL	A	285	55.863	35.383	29.482	1.00	34.18	C
ATOM	1268	C	VAL	A	285	56.556	36.709	29.781	1.00	33.12	C
ATOM	1269	O	VAL	A	285	56.094	37.486	30.619	1.00	32.87	O
ATOM	1270	CB	VAL	A	285	54.453	35.630	28.899	1.00	33.89	C
ATOM	1271	CG1	VAL	A	285	54.520	36.625	27.749	1.00	33.39	C
ATOM	1272	CG2	VAL	A	285	53.868	34.311	28.408	1.00	33.56	C
ATOM	1273	N	LYS	A	286	57.676	36.951	29.108	1.00	32.14	N
ATOM	1274	CA	LYS	A	286	58.457	38.171	29.313	1.00	31.09	C
ATOM	1275	C	LYS	A	286	57.988	39.305	28.407	1.00	30.39	C
ATOM	1276	O	LYS	A	286	57.751	39.107	27.216	1.00	29.75	O
ATOM	1277	CB	LYS	A	286	59.943	37.885	29.067	1.00	31.10	C
ATOM	1278	CG	LYS	A	286	60.484	36.696	29.857	1.00	31.07	C
ATOM	1279	CD	LYS	A	286	60.260	36.865	31.357	1.00	31.03	C
ATOM	1280	CE	LYS	A	286	60.845	35.697	32.145	1.00	31.38	C
ATOM	1281	NZ	LYS	A	286	60.578	35.811	33.619	1.00	31.84	N
ATOM	1282	N	VAL	A	287	57.858	40.498	28.980	1.00	29.67	N
ATOM	1283	CA	VAL	A	287	57.402	41.649	28.218	1.00	28.82	C
ATOM	1284	C	VAL	A	287	58.123	42.952	28.571	1.00	28.35	C
ATOM	1285	O	VAL	A	287	58.116	43.395	29.723	1.00	28.33	O
ATOM	1286	CB	VAL	A	287	55.870	41.843	28.397	1.00	29.01	C
ATOM	1287	CG1	VAL	A	287	55.514	41.886	29.873	1.00	29.59	C
ATOM	1288	CG2	VAL	A	287	55.417	43.120	27.721	1.00	28.72	C
ATOM	1289	N	GLY	A	288	58.754	43.555	27.568	1.00	27.62	N
ATOM	1290	CA	GLY	A	288	59.441	44.817	27.771	1.00	26.79	C
ATOM	1291	C	GLY	A	288	58.434	45.938	27.573	1.00	26.65	C
ATOM	1292	O	GLY	A	288	57.403	45.737	26.922	1.00	26.44	O

TABLE 5

ATOM	1293	N	ALA	A	289	58.721	47.112	28.128	1.00	26.17	N
ATOM	1294	CA	ALA	A	289	57.820	48.255	28.012	1.00	26.19	C
ATOM	1295	C	ALA	A	289	58.591	49.543	27.741	1.00	26.50	C
ATOM	1296	O	ALA	A	289	59.810	49.593	27.900	1.00	26.69	O
ATOM	1297	CB	ALA	A	289	56.994	48.401	29.291	1.00	26.59	C
ATOM	1298	N	GLY	A	290	57.871	50.584	27.331	1.00	26.15	N
ATOM	1299	CA	GLY	A	290	58.502	51.856	27.037	1.00	25.55	C
ATOM	1300	C	GLY	A	290	57.745	52.567	25.930	1.00	25.64	C
ATOM	1301	O	GLY	A	290	56.726	52.059	25.470	1.00	25.93	O
ATOM	1302	N	ASN	A	291	58.246	53.712	25.468	1.00	24.68	N
ATOM	1303	CA	ASN	A	291	59.491	54.295	25.961	1.00	24.17	C
ATOM	1304	C	ASN	A	291	59.309	55.373	27.022	1.00	23.88	C
ATOM	1305	O	ASN	A	291	58.278	56.041	27.078	1.00	24.05	O
ATOM	1306	CB	ASN	A	291	60.279	54.883	24.788	1.00	23.44	C
ATOM	1307	CG	ASN	A	291	60.771	53.819	23.840	1.00	24.01	C
ATOM	1308	OD1	ASN	A	291	60.266	52.695	23.849	1.00	24.09	O
ATOM	1309	ND2	ASN	A	291	61.756	54.162	23.012	1.00	22.58	N
ATOM	1310	N	ILE	A	292	60.323	55.522	27.867	1.00	23.43	N
ATOM	1311	CA	ILE	A	292	60.329	56.541	28.906	1.00	23.67	C
ATOM	1312	C	ILE	A	292	61.706	57.220	28.861	1.00	23.76	C
ATOM	1313	O	ILE	A	292	62.642	56.688	28.247	1.00	23.31	O
ATOM	1314	CB	ILE	A	292	60.033	55.936	30.324	1.00	23.51	C
ATOM	1315	CG1	ILE	A	292	60.898	54.703	30.594	1.00	23.67	C
ATOM	1316	CG2	ILE	A	292	58.561	55.563	30.426	1.00	23.40	C
ATOM	1317	CD1	ILE	A	292	62.342	55.009	30.958	1.00	23.64	C
ATOM	1318	N	VAL	A	293	61.823	58.393	29.481	1.00	23.36	N
ATOM	1319	CA	VAL	A	293	63.084	59.137	29.478	1.00	23.68	C
ATOM	1320	C	VAL	A	293	63.490	59.686	30.844	1.00	24.18	C
ATOM	1321	O	VAL	A	293	64.459	60.439	30.946	1.00	24.31	O
ATOM	1322	CB	VAL	A	293	63.033	60.329	28.480	1.00	23.27	C
ATOM	1323	CG1	VAL	A	293	62.966	59.815	27.047	1.00	22.91	C
ATOM	1324	CG2	VAL	A	293	61.823	61.209	28.776	1.00	22.79	C
ATOM	1325	N	ASP	A	294	62.750	59.328	31.889	1.00	24.54	N
ATOM	1326	CA	ASP	A	294	63.095	59.794	33.227	1.00	25.28	C
ATOM	1327	C	ASP	A	294	62.808	58.743	34.300	1.00	25.54	C
ATOM	1328	O	ASP	A	294	62.245	57.688	34.013	1.00	25.69	O
ATOM	1329	CB	ASP	A	294	62.372	61.120	33.544	1.00	24.98	C
ATOM	1330	CG	ASP	A	294	60.862	60.962	33.726	1.00	25.49	C
ATOM	1331	OD1	ASP	A	294	60.290	59.921	33.347	1.00	26.22	O
ATOM	1332	OD2	ASP	A	294	60.238	61.911	34.244	1.00	25.60	O
ATOM	1333	N	GLY	A	295	63.221	59.031	35.531	1.00	26.27	N
ATOM	1334	CA	GLY	A	295	63.008	58.106	36.628	1.00	26.98	C
ATOM	1335	C	GLY	A	295	61.553	57.787	36.914	1.00	27.45	C
ATOM	1336	O	GLY	A	295	61.216	56.643	37.216	1.00	27.19	O
ATOM	1337	N	GLU	A	296	60.686	58.793	36.829	1.00	28.15	N
ATOM	1338	CA	GLU	A	296	59.263	58.582	37.084	1.00	29.28	C
ATOM	1339	C	GLU	A	296	58.669	57.578	36.110	1.00	28.28	C
ATOM	1340	O	GLU	A	296	57.908	56.705	36.508	1.00	28.87	O
ATOM	1341	CB	GLU	A	296	58.477	59.889	36.959	1.00	31.29	C
ATOM	1342	CG	GLU	A	296	58.771	60.920	38.014	1.00	35.34	C
ATOM	1343	CD	GLU	A	296	57.900	62.166	37.866	1.00	38.57	C
ATOM	1344	OE1	GLU	A	296	58.213	63.169	38.544	1.00	40.66	O
ATOM	1345	OE2	GLU	A	296	56.910	62.148	37.081	1.00	39.48	O
ATOM	1346	N	GLY	A	297	58.996	57.728	34.830	1.00	27.39	N
ATOM	1347	CA	GLY	A	297	58.482	56.819	33.821	1.00	26.83	C
ATOM	1348	C	GLY	A	297	58.997	55.406	34.032	1.00	26.40	C
ATOM	1349	O	GLY	A	297	58.261	54.436	33.850	1.00	26.39	O

ATOM	1350	N	PHE	A	298	60.270	55.292	34.399	1.00	25.90	N
ATOM	1351	CA	PHE	A	298	60.886	53.992	34.667	1.00	25.89	C
ATOM	1352	C	PHE	A	298	60.156	53.324	35.825	1.00	26.26	C
ATOM	1353	O	PHE	A	298	59.741	52.173	35.736	1.00	26.46	O
ATOM	1354	CB	PHE	A	298	62.356	54.158	35.073	1.00	24.63	C
ATOM	1355	CG	PHE	A	298	62.973	52.900	35.625	1.00	24.52	C
ATOM	1356	CD1	PHE	A	298	63.510	51.935	34.774	1.00	24.45	C
ATOM	1357	CD2	PHE	A	298	62.948	52.642	36.993	1.00	24.69	C
ATOM	1358	CE1	PHE	A	298	64.004	50.729	35.283	1.00	24.11	C
ATOM	1359	CE2	PHE	A	298	63.438	51.441	37.506	1.00	24.45	C
ATOM	1360	CZ	PHE	A	298	63.965	50.485	36.648	1.00	24.01	C
ATOM	1361	N	ARG	A	299	60.038	54.071	36.917	1.00	26.97	N
ATOM	1362	CA	ARG	A	299	59.392	53.627	38.148	1.00	27.76	C
ATOM	1363	C	ARG	A	299	57.979	53.112	37.896	1.00	27.50	C
ATOM	1364	O	ARG	A	299	57.575	52.073	38.432	1.00	27.02	O
ATOM	1365	CB	ARG	A	299	59.368	54.798	39.134	1.00	29.28	C
ATOM	1366	CG	ARG	A	299	58.488	54.625	40.354	1.00	32.58	C
ATOM	1367	CD	ARG	A	299	59.185	53.881	41.472	1.00	34.72	C
ATOM	1368	NE	ARG	A	299	60.450	54.500	41.869	1.00	36.94	N
ATOM	1369	CZ	ARG	A	299	61.175	54.093	42.911	1.00	37.49	C
ATOM	1370	NH1	ARG	A	299	60.748	53.081	43.656	1.00	37.79	N
ATOM	1371	NH2	ARG	A	299	62.336	54.671	43.191	1.00	37.51	N
ATOM	1372	N	TYR	A	300	57.228	53.840	37.076	1.00	26.42	N
ATOM	1373	CA	TYR	A	300	55.867	53.448	36.764	1.00	26.07	C
ATOM	1374	C	TYR	A	300	55.807	52.106	36.028	1.00	25.82	C
ATOM	1375	O	TYR	A	300	54.967	51.263	36.332	1.00	25.66	O
ATOM	1376	CB	TYR	A	300	55.194	54.517	35.905	1.00	26.47	C
ATOM	1377	CG	TYR	A	300	53.740	54.220	35.612	1.00	26.10	C
ATOM	1378	CD1	TYR	A	300	52.755	54.430	36.583	1.00	25.70	C
ATOM	1379	CD2	TYR	A	300	53.349	53.726	34.367	1.00	25.87	C
ATOM	1380	CE1	TYR	A	300	51.413	54.157	36.318	1.00	25.69	C
ATOM	1381	CE2	TYR	A	300	52.013	53.450	34.092	1.00	26.08	C
ATOM	1382	CZ	TYR	A	300	51.052	53.671	35.069	1.00	26.05	C
ATOM	1383	OH	TYR	A	300	49.729	53.428	34.780	1.00	26.67	O
ATOM	1384	N	LEU	A	301	56.687	51.912	35.054	1.00	24.94	N
ATOM	1385	CA	LEU	A	301	56.686	50.667	34.297	1.00	24.79	C
ATOM	1386	C	LEU	A	301	57.290	49.516	35.104	1.00	25.13	C
ATOM	1387	O	LEU	A	301	56.933	48.356	34.910	1.00	24.72	O
ATOM	1388	CB	LEU	A	301	57.422	50.860	32.965	1.00	23.46	C
ATOM	1389	CG	LEU	A	301	56.676	51.797	31.998	1.00	22.90	C
ATOM	1390	CD1	LEU	A	301	57.460	51.938	30.687	1.00	21.27	C
ATOM	1391	CD2	LEU	A	301	55.273	51.237	31.726	1.00	22.01	C
ATOM	1392	N	ALA	A	302	58.194	49.844	36.020	1.00	25.45	N
ATOM	1393	CA	ALA	A	302	58.803	48.828	36.867	1.00	26.43	C
ATOM	1394	C	ALA	A	302	57.718	48.269	37.802	1.00	27.00	C
ATOM	1395	O	ALA	A	302	57.551	47.053	37.912	1.00	26.60	O
ATOM	1396	CB	ALA	A	302	59.944	49.433	37.676	1.00	25.79	C
ATOM	1397	N	ASP	A	303	56.976	49.163	38.456	1.00	27.78	N
ATOM	1398	CA	ASP	A	303	55.911	48.748	39.366	1.00	28.82	C
ATOM	1399	C	ASP	A	303	54.817	48.007	38.606	1.00	29.16	C
ATOM	1400	O	ASP	A	303	54.177	47.115	39.157	1.00	30.06	O
ATOM	1401	CB	ASP	A	303	55.287	49.948	40.100	1.00	29.58	C
ATOM	1402	CG	ASP	A	303	56.218	50.565	41.138	1.00	31.14	C
ATOM	1403	OD1	ASP	A	303	57.081	49.848	41.693	1.00	31.95	O
ATOM	1404	OD2	ASP	A	303	56.070	51.774	41.417	1.00	32.16	O
ATOM	1405	N	ALA	A	304	54.594	48.382	37.348	1.00	28.83	N
ATOM	1406	CA	ALA	A	304	53.581	47.721	36.531	1.00	28.20	C

TABLE 5

ATOM	1407	C	ALA A 304	54.008	46.288	36.197	1.00	28.33	C
ATOM	1408	O	ALA A 304	53.179	45.461	35.818	1.00	28.02	O
ATOM	1409	CB	ALA A 304	53.343	48.499	35.260	1.00	27.85	C
ATOM	1410	N	GLY A 305	55.303	46.001	36.316	1.00	28.12	N
ATOM	1411	CA	GLY A 305	55.777	44.649	36.051	1.00	27.69	C
ATOM	1412	C	GLY A 305	56.626	44.386	34.820	1.00	27.36	C
ATOM	1413	O	GLY A 305	56.891	43.228	34.486	1.00	27.45	O
ATOM	1414	N	ALA A 306	57.064	45.439	34.141	1.00	26.93	N
ATOM	1415	CA	ALA A 306	57.884	45.268	32.945	1.00	26.72	C
ATOM	1416	C	ALA A 306	59.144	44.438	33.220	1.00	26.12	C
ATOM	1417	O	ALA A 306	59.759	44.557	34.277	1.00	26.19	O
ATOM	1418	CB	ALA A 306	58.271	46.642	32.382	1.00	26.69	C
ATOM	1419	N	ASP A 307	59.521	43.595	32.263	1.00	26.12	N
ATOM	1420	CA	ASP A 307	60.716	42.763	32.392	1.00	25.75	C
ATOM	1421	C	ASP A 307	61.976	43.541	31.989	1.00	25.56	C
ATOM	1422	O	ASP A 307	63.084	43.221	32.414	1.00	25.02	O
ATOM	1423	CB	ASP A 307	60.550	41.494	31.556	1.00	25.88	C
ATOM	1424	CG	ASP A 307	59.605	40.503	32.210	1.00	26.34	C
ATOM	1425	OD1	ASP A 307	59.941	40.031	33.316	1.00	25.65	O
ATOM	1426	OD2	ASP A 307	58.532	40.208	31.639	1.00	26.39	O
ATOM	1427	N	PHE A 308	61.791	44.553	31.148	1.00	25.21	N
ATOM	1428	CA	PHE A 308	62.872	45.435	30.739	1.00	25.37	C
ATOM	1429	C	PHE A 308	62.207	46.715	30.251	1.00	25.54	C
ATOM	1430	O	PHE A 308	61.096	46.689	29.718	1.00	26.05	O
ATOM	1431	CB	PHE A 308	63.803	44.781	29.692	1.00	24.85	C
ATOM	1432	CG	PHE A 308	63.254	44.722	28.286	1.00	25.59	C
ATOM	1433	CD1	PHE A 308	63.202	45.866	27.488	1.00	25.36	C
ATOM	1434	CD2	PHE A 308	62.863	43.499	27.730	1.00	25.52	C
ATOM	1435	CE1	PHE A 308	62.776	45.789	26.158	1.00	25.87	C
ATOM	1436	CE2	PHE A 308	62.435	43.413	26.397	1.00	25.33	C
ATOM	1437	CZ	PHE A 308	62.393	44.558	25.611	1.00	25.03	C
ATOM	1438	N	ILE A 309	62.860	47.844	30.490	1.00	25.29	N
ATOM	1439	CA	ILE A 309	62.293	49.126	30.118	1.00	25.21	C
ATOM	1440	C	ILE A 309	63.119	49.820	29.041	1.00	24.80	C
ATOM	1441	O	ILE A 309	64.338	49.945	29.152	1.00	24.39	O
ATOM	1442	CB	ILE A 309	62.124	50.001	31.390	1.00	25.06	C
ATOM	1443	CG1	ILE A 309	61.045	49.356	32.280	1.00	24.71	C
ATOM	1444	CG2	ILE A 309	61.743	51.429	31.018	1.00	24.45	C
ATOM	1445	CD1	ILE A 309	60.990	49.849	33.715	1.00	23.70	C
ATOM	1446	N	LYS A 310	62.430	50.249	27.988	1.00	24.64	N
ATOM	1447	CA	LYS A 310	63.066	50.895	26.850	1.00	24.86	C
ATOM	1448	C	LYS A 310	63.134	52.416	27.024	1.00	24.46	C
ATOM	1449	O	LYS A 310	62.146	53.060	27.373	1.00	24.21	O
ATOM	1450	CB	LYS A 310	62.311	50.509	25.574	1.00	25.07	C
ATOM	1451	CG	LYS A 310	63.177	50.404	24.340	1.00	25.07	C
ATOM	1452	CD	LYS A 310	62.769	49.218	23.461	1.00	25.06	C
ATOM	1453	CE	LYS A 310	61.376	49.398	22.850	1.00	25.52	C
ATOM	1454	NZ	LYS A 310	61.267	50.678	22.090	1.00	25.01	N
ATOM	1455	N	ILE A 311	64.316	52.971	26.768	1.00	24.00	N
ATOM	1456	CA	ILE A 311	64.571	54.401	26.925	1.00	23.52	C
ATOM	1457	C	ILE A 311	64.715	55.166	25.613	1.00	23.91	C
ATOM	1458	O	ILE A 311	65.486	54.776	24.737	1.00	23.10	O
ATOM	1459	CB	ILE A 311	65.883	54.643	27.715	1.00	22.79	C
ATOM	1460	CG1	ILE A 311	65.828	53.933	29.070	1.00	22.26	C
ATOM	1461	CG2	ILE A 311	66.121	56.146	27.878	1.00	21.49	C
ATOM	1462	CD1	ILE A 311	67.200	53.802	29.751	1.00	21.78	C
ATOM	1463	N	GLY A 312	63.991	56.270	25.484	1.00	24.94	N

ATOM	1464	CA	GLY A 312	64.137	57.058	24.280	1.00	26.52	C
ATOM	1465	C	GLY A 312	62.921	57.644	23.599	1.00	28.07	C
ATOM	1466	O	GLY A 312	62.052	56.925	23.108	1.00	27.43	O
ATOM	1467	N	ILE A 313	62.876	58.971	23.575	1.00	30.06	N
ATOM	1468	CA	ILE A 313	61.819	59.715	22.907	1.00	32.43	C
ATOM	1469	C	ILE A 313	62.497	60.917	22.262	1.00	34.74	C
ATOM	1470	O	ILE A 313	63.031	61.788	22.954	1.00	33.88	O
ATOM	1471	CB	ILE A 313	60.745	60.229	23.881	1.00	32.08	C
ATOM	1472	CG1	ILE A 313	60.029	59.055	24.554	1.00	31.93	C
ATOM	1473	CG2	ILE A 313	59.735	61.071	23.117	1.00	32.14	C
ATOM	1474	CD1	ILE A 313	58.970	59.481	25.560	1.00	31.83	C
ATOM	1475	N	GLY A 314	62.484	60.959	20.935	1.00	37.68	N
ATOM	1476	CA	GLY A 314	63.115	62.065	20.241	1.00	41.68	C
ATOM	1477	C	GLY A 314	64.614	61.848	20.205	1.00	44.77	C
ATOM	1478	O	GLY A 314	65.380	62.540	20.898	1.00	45.22	O
ATOM	1479	N	GLY A 315	65.025	60.864	19.406	1.00	46.78	N
ATOM	1480	CA	GLY A 315	66.432	60.539	19.265	1.00	49.14	C
ATOM	1481	C	GLY A 315	66.702	59.826	17.952	1.00	50.80	C
ATOM	1482	O	GLY A 315	67.732	60.057	17.310	1.00	51.20	O
ATOM	1483	N	GLY A 316	65.774	58.962	17.547	1.00	52.08	N
ATOM	1484	CA	GLY A 316	65.934	58.224	16.304	1.00	53.45	C
ATOM	1485	C	GLY A 316	66.265	59.085	15.092	1.00	54.43	C
ATOM	1486	O	GLY A 316	66.109	60.310	15.124	1.00	54.52	O
ATOM	1487	N	SER A 317	66.718	58.437	14.019	1.00	55.17	N
ATOM	1488	CA	SER A 317	67.086	59.120	12.776	1.00	55.85	C
ATOM	1489	C	SER A 317	66.116	60.238	12.410	1.00	56.05	C
ATOM	1490	O	SER A 317	66.224	60.838	11.338	1.00	56.24	O
ATOM	1491	CB	SER A 317	67.152	58.117	11.618	1.00	56.06	C
ATOM	1492	OG	SER A 317	68.116	57.109	11.864	1.00	56.47	O
ATOM	1493	N	ARG A 322	60.666	65.002	18.046	1.00	69.94	N
ATOM	1494	CA	ARG A 322	60.632	66.036	19.075	1.00	69.88	C
ATOM	1495	C	ARG A 322	60.442	67.421	18.458	1.00	69.25	C
ATOM	1496	O	ARG A 322	59.992	68.357	19.123	1.00	69.33	O
ATOM	1497	CB	ARG A 322	61.922	65.990	19.904	1.00	70.76	C
ATOM	1498	CG	ARG A 322	63.200	66.013	19.077	1.00	72.26	C
ATOM	1499	CD	ARG A 322	64.412	65.622	19.916	1.00	73.59	C
ATOM	1500	NE	ARG A 322	65.616	65.472	19.098	1.00	75.09	N
ATOM	1501	CZ	ARG A 322	66.295	66.483	18.561	1.00	75.74	C
ATOM	1502	NH1	ARG A 322	65.893	67.733	18.757	1.00	75.89	N
ATOM	1503	NH2	ARG A 322	67.372	66.241	17.818	1.00	75.84	N
ATOM	1504	N	GLU A 323	60.786	67.544	17.180	1.00	68.34	N
ATOM	1505	CA	GLU A 323	60.638	68.805	16.466	1.00	66.98	C
ATOM	1506	C	GLU A 323	59.314	68.796	15.706	1.00	65.40	C
ATOM	1507	O	GLU A 323	59.205	69.339	14.603	1.00	65.33	O
ATOM	1508	CB	GLU A 323	61.805	69.003	15.495	1.00	68.07	C
ATOM	1509	CG	GLU A 323	63.168	69.072	16.178	1.00	69.20	C
ATOM	1510	CD	GLU A 323	64.322	69.148	15.188	1.00	70.01	C
ATOM	1511	OE1	GLU A 323	64.371	70.116	14.393	1.00	70.24	O
ATOM	1512	OE2	GLU A 323	65.181	68.238	15.209	1.00	70.24	O
ATOM	1513	N	GLN A 324	58.311	68.163	16.311	1.00	63.21	N
ATOM	1514	CA	GLN A 324	56.982	68.075	15.722	1.00	60.76	C
ATOM	1515	C	GLN A 324	55.916	68.047	16.814	1.00	58.40	C
ATOM	1516	O	GLN A 324	54.859	68.662	16.679	1.00	58.63	O
ATOM	1517	CB	GLN A 324	56.861	66.821	14.852	1.00	61.63	C
ATOM	1518	CG	GLN A 324	55.533	66.714	14.120	1.00	62.44	C
ATOM	1519	CD	GLN A 324	55.341	67.814	13.085	1.00	63.06	C
ATOM	1520	OE1	GLN A 324	55.567	68.996	13.363	1.00	63.40	O



ATOM	1521	NE2	GLN	A	324	54.910	67.431	11.887	1.00	63.02	N
ATOM	1522	N	LYS	A	325	56.193	67.329	17.897	1.00	55.16	N
ATOM	1523	CA	LYS	A	325	55.246	67.250	19.001	1.00	51.62	C
ATOM	1524	C	LYS	A	325	55.822	67.983	20.207	1.00	48.73	C
ATOM	1525	O	LYS	A	325	55.092	68.412	21.099	1.00	48.29	O
ATOM	1526	CB	LYS	A	325	54.962	65.789	19.347	1.00	52.41	C
ATOM	1527	CG	LYS	A	325	53.645	65.576	20.063	1.00	52.70	C
ATOM	1528	CD	LYS	A	325	53.291	64.104	20.115	1.00	53.01	C
ATOM	1529	CE	LYS	A	325	51.906	63.905	20.678	1.00	53.28	C
ATOM	1530	NZ	LYS	A	325	51.527	62.469	20.681	1.00	54.05	N
ATOM	1531	N	GLY	A	326	57.141	68.124	20.225	1.00	45.49	N
ATOM	1532	CA	GLY	A	326	57.789	68.832	21.311	1.00	42.06	C
ATOM	1533	C	GLY	A	326	58.097	68.028	22.558	1.00	39.58	C
ATOM	1534	O	GLY	A	326	58.407	68.613	23.591	1.00	38.74	O
ATOM	1535	N	ILE	A	327	58.002	66.703	22.478	1.00	37.33	N
ATOM	1536	CA	ILE	A	327	58.302	65.861	23.629	1.00	35.54	C
ATOM	1537	C	ILE	A	327	59.598	65.096	23.385	1.00	34.11	C
ATOM	1538	O	ILE	A	327	59.911	64.723	22.256	1.00	33.94	O
ATOM	1539	CB	ILE	A	327	57.165	64.836	23.936	1.00	35.64	C
ATOM	1540	CG1	ILE	A	327	57.042	63.815	22.807	1.00	35.72	C
ATOM	1541	CG2	ILE	A	327	55.837	65.563	24.130	1.00	35.90	C
ATOM	1542	CD1	ILE	A	327	56.106	62.650	23.131	1.00	36.15	C
ATOM	1543	N	GLY	A	328	60.357	64.869	24.447	1.00	32.52	N
ATOM	1544	CA	GLY	A	328	61.599	64.142	24.295	1.00	30.76	C
ATOM	1545	C	GLY	A	328	62.680	64.581	25.260	1.00	29.34	C
ATOM	1546	O	GLY	A	328	62.447	65.403	26.153	1.00	27.81	O
ATOM	1547	N	ARG	A	329	63.874	64.030	25.066	1.00	27.97	N
ATOM	1548	CA	ARG	A	329	65.008	64.343	25.919	1.00	27.02	C
ATOM	1549	C	ARG	A	329	66.265	63.793	25.272	1.00	26.17	C
ATOM	1550	O	ARG	A	329	66.222	62.730	24.657	1.00	26.57	O
ATOM	1551	CB	ARG	A	329	64.813	63.691	27.295	1.00	26.66	C
ATOM	1552	CG	ARG	A	329	65.752	64.198	28.374	1.00	25.97	C
ATOM	1553	CD	ARG	A	329	65.514	63.470	29.688	1.00	26.09	C
ATOM	1554	NE	ARG	A	329	65.797	64.324	30.835	1.00	26.17	N
ATOM	1555	CZ	ARG	A	329	65.626	63.964	32.103	1.00	27.08	C
ATOM	1556	NH1	ARG	A	329	65.177	62.752	32.408	1.00	26.65	N
ATOM	1557	NH2	ARG	A	329	65.884	64.829	33.072	1.00	27.28	N
ATOM	1558	N	GLY	A	330	67.377	64.513	25.396	1.00	25.55	N
ATOM	1559	CA	GLY	A	330	68.625	64.021	24.837	1.00	24.59	C
ATOM	1560	C	GLY	A	330	68.797	62.587	25.311	1.00	24.12	C
ATOM	1561	O	GLY	A	330	68.580	62.287	26.482	1.00	23.28	O
ATOM	1562	N	GLN	A	331	69.180	61.698	24.404	1.00	24.45	N
ATOM	1563	CA	GLN	A	331	69.332	60.286	24.729	1.00	24.31	C
ATOM	1564	C	GLN	A	331	70.295	60.017	25.883	1.00	24.63	C
ATOM	1565	O	GLN	A	331	70.000	59.191	26.751	1.00	24.51	O
ATOM	1566	CB	GLN	A	331	69.772	59.505	23.486	1.00	24.66	C
ATOM	1567	CG	GLN	A	331	69.635	57.989	23.627	1.00	25.35	C
ATOM	1568	CD	GLN	A	331	68.181	57.536	23.753	1.00	26.40	C
ATOM	1569	OE1	GLN	A	331	67.905	56.422	24.197	1.00	27.18	O
ATOM	1570	NE2	GLN	A	331	67.251	58.395	23.351	1.00	25.73	N
ATOM	1571	N	ALA	A	332	71.435	60.713	25.904	1.00	23.94	N
ATOM	1572	CA	ALA	A	332	72.420	60.515	26.964	1.00	23.57	C
ATOM	1573	C	ALA	A	332	71.833	60.835	28.338	1.00	23.62	C
ATOM	1574	O	ALA	A	332	71.955	60.044	29.278	1.00	23.57	O
ATOM	1575	CB	ALA	A	332	73.669	61.375	26.702	1.00	23.41	C
ATOM	1576	N	THR	A	333	71.192	61.993	28.451	1.00	23.21	N
ATOM	1577	CA	THR	A	333	70.584	62.403	29.707	1.00	22.90	C

ATOM	1578	C	THR	A	333	69.500	61.408	30.105	1.00	23.18	C
ATOM	1579	O	THR	A	333	69.380	61.031	31.273	1.00	22.90	O
ATOM	1580	CB	THR	A	333	69.967	63.814	29.590	1.00	22.97	C
ATOM	1581	OG1	THR	A	333	70.992	64.751	29.222	1.00	22.52	O
ATOM	1582	CG2	THR	A	333	69.349	64.240	30.922	1.00	21.69	C
ATOM	1583	N	ALA	A	334	68.717	60.977	29.123	1.00	23.07	N
ATOM	1584	CA	ALA	A	334	67.648	60.018	29.373	1.00	23.70	C
ATOM	1585	C	ALA	A	334	68.206	58.718	29.963	1.00	23.40	C
ATOM	1586	O	ALA	A	334	67.717	58.223	30.977	1.00	23.84	O
ATOM	1587	CB	ALA	A	334	66.890	59.731	28.070	1.00	23.17	C
ATOM	1588	N	VAL	A	335	69.231	58.168	29.324	1.00	23.69	N
ATOM	1589	CA	VAL	A	335	69.842	56.933	29.797	1.00	24.02	C
ATOM	1590	C	VAL	A	335	70.430	57.107	31.194	1.00	24.09	C
ATOM	1591	O	VAL	A	335	70.147	56.316	32.100	1.00	24.31	O
ATOM	1592	CB	VAL	A	335	70.955	56.459	28.837	1.00	24.63	C
ATOM	1593	CG1	VAL	A	335	71.682	55.254	29.431	1.00	25.02	C
ATOM	1594	CG2	VAL	A	335	70.348	56.090	27.487	1.00	24.84	C
ATOM	1595	N	ILE	A	336	71.240	58.147	31.371	1.00	24.11	N
ATOM	1596	CA	ILE	A	336	71.867	58.416	32.661	1.00	23.87	C
ATOM	1597	C	ILE	A	336	70.851	58.544	33.801	1.00	24.46	C
ATOM	1598	O	ILE	A	336	71.039	57.963	34.874	1.00	23.73	O
ATOM	1599	CB	ILE	A	336	72.725	59.701	32.607	1.00	23.35	C
ATOM	1600	CG1	ILE	A	336	73.913	59.495	31.660	1.00	22.68	C
ATOM	1601	CG2	ILE	A	336	73.234	60.055	34.008	1.00	22.89	C
ATOM	1602	CD1	ILE	A	336	74.743	60.756	31.431	1.00	22.49	C
ATOM	1603	N	ASP	A	337	69.775	59.296	33.572	1.00	24.98	N
ATOM	1604	CA	ASP	A	337	68.759	59.479	34.606	1.00	25.52	C
ATOM	1605	C	ASP	A	337	67.938	58.219	34.875	1.00	24.84	C
ATOM	1606	O	ASP	A	337	67.629	57.907	36.024	1.00	24.56	O
ATOM	1607	CB	ASP	A	337	67.818	60.637	34.245	1.00	27.31	C
ATOM	1608	CG	ASP	A	337	68.502	62.000	34.327	1.00	30.71	C
ATOM	1609	OD1	ASP	A	337	69.614	62.096	34.913	1.00	32.05	O
ATOM	1610	OD2	ASP	A	337	67.918	62.983	33.815	1.00	31.24	O
ATOM	1611	N	VAL	A	338	67.569	57.501	33.822	1.00	24.57	N
ATOM	1612	CA	VAL	A	338	66.787	56.280	34.006	1.00	23.99	C
ATOM	1613	C	VAL	A	338	67.631	55.230	34.735	1.00	23.85	C
ATOM	1614	O	VAL	A	338	67.139	54.547	35.627	1.00	23.32	O
ATOM	1615	CB	VAL	A	338	66.288	55.716	32.646	1.00	23.60	C
ATOM	1616	CG1	VAL	A	338	65.631	54.347	32.848	1.00	23.15	C
ATOM	1617	CG2	VAL	A	338	65.280	56.690	32.019	1.00	22.47	C
ATOM	1618	N	VAL	A	339	68.906	55.126	34.362	1.00	23.84	N
ATOM	1619	CA	VAL	A	339	69.816	54.165	34.981	1.00	24.21	C
ATOM	1620	C	VAL	A	339	69.980	54.429	36.480	1.00	25.13	C
ATOM	1621	O	VAL	A	339	70.043	53.493	37.278	1.00	25.49	O
ATOM	1622	CB	VAL	A	339	71.215	54.195	34.289	1.00	23.92	C
ATOM	1623	CG1	VAL	A	339	72.270	53.502	35.158	1.00	23.40	C
ATOM	1624	CG2	VAL	A	339	71.134	53.503	32.940	1.00	23.43	C
ATOM	1625	N	ALA	A	340	70.053	55.700	36.866	1.00	25.88	N
ATOM	1626	CA	ALA	A	340	70.202	56.042	38.278	1.00	26.36	C
ATOM	1627	C	ALA	A	340	68.959	55.600	39.051	1.00	26.83	C
ATOM	1628	O	ALA	A	340	69.053	55.132	40.185	1.00	26.86	O
ATOM	1629	CB	ALA	A	340	70.419	57.540	38.437	1.00	26.17	C
ATOM	1630	N	GLU	A	341	67.796	55.750	38.429	1.00	27.07	N
ATOM	1631	CA	GLU	A	341	66.542	55.358	39.061	1.00	27.92	C
ATOM	1632	C	GLU	A	341	66.472	53.834	39.131	1.00	27.70	C
ATOM	1633	O	GLU	A	341	66.016	53.273	40.124	1.00	27.73	O
ATOM	1634	CB	GLU	A	341	65.358	55.898	38.256	1.00	28.93	C

ATOM	1635	CG	GLU A 341	64.004	55.796	38.960	1.00	30.89	C
ATOM	1636	CD	GLU A 341	63.955	56.592	40.258	1.00	32.66	C
ATOM	1637	OE1	GLU A 341	64.480	57.727	40.299	1.00	34.48	O
ATOM	1638	OE2	GLU A 341	63.380	56.090	41.240	1.00	34.06	O
ATOM	1639	N	ARG A 342	66.926	53.173	38.067	1.00	27.14	N
ATOM	1640	CA	ARG A 342	66.928	51.714	37.999	1.00	26.71	C
ATOM	1641	C	ARG A 342	67.821	51.149	39.103	1.00	26.54	C
ATOM	1642	O	ARG A 342	67.497	50.130	39.716	1.00	26.18	O
ATOM	1643	CB	ARG A 342	67.426	51.254	36.618	1.00	25.95	C
ATOM	1644	CG	ARG A 342	67.409	49.739	36.373	1.00	24.78	C
ATOM	1645	CD	ARG A 342	68.642	49.033	36.940	1.00	23.69	C
ATOM	1646	NE	ARG A 342	69.905	49.458	36.335	1.00	23.29	N
ATOM	1647	CZ	ARG A 342	70.262	49.229	35.070	1.00	23.19	C
ATOM	1648	NH1	ARG A 342	69.453	48.574	34.247	1.00	22.48	N
ATOM	1649	NH2	ARG A 342	71.442	49.648	34.626	1.00	22.80	N
ATOM	1650	N	ASN A 343	68.943	51.815	39.354	1.00	26.63	N
ATOM	1651	CA	ASN A 343	69.866	51.363	40.389	1.00	27.25	C
ATOM	1652	C	ASN A 343	69.271	51.619	41.770	1.00	28.00	C
ATOM	1653	O	ASN A 343	69.415	50.804	42.680	1.00	27.55	O
ATOM	1654	CB	ASN A 343	71.222	52.055	40.238	1.00	26.44	C
ATOM	1655	CG	ASN A 343	71.979	51.575	39.008	1.00	26.67	C
ATOM	1656	OD1	ASN A 343	71.660	50.523	38.445	1.00	26.42	O
ATOM	1657	ND2	ASN A 343	72.995	52.330	38.595	1.00	25.68	N
ATOM	1658	N	LYS A 344	68.585	52.748	41.913	1.00	28.63	N
ATOM	1659	CA	LYS A 344	67.937	53.089	43.168	1.00	30.19	C
ATOM	1660	C	LYS A 344	66.852	52.044	43.419	1.00	30.06	C
ATOM	1661	O	LYS A 344	66.702	51.536	44.530	1.00	30.48	O
ATOM	1662	CB	LYS A 344	67.308	54.481	43.073	1.00	31.64	C
ATOM	1663	CG	LYS A 344	66.560	54.917	44.323	1.00	34.82	C
ATOM	1664	CD	LYS A 344	65.887	56.276	44.143	1.00	36.84	C
ATOM	1665	CE	LYS A 344	66.890	57.354	43.756	1.00	38.89	C
ATOM	1666	NZ	LYS A 344	66.248	58.707	43.638	1.00	41.17	N
ATOM	1667	N	TYR A 345	66.107	51.723	42.367	1.00	29.84	N
ATOM	1668	CA	TYR A 345	65.032	50.743	42.443	1.00	30.10	C
ATOM	1669	C	TYR A 345	65.576	49.370	42.854	1.00	30.60	C
ATOM	1670	O	TYR A 345	64.960	48.665	43.654	1.00	30.17	O
ATOM	1671	CB	TYR A 345	64.334	50.635	41.088	1.00	29.60	C
ATOM	1672	CG	TYR A 345	63.051	49.828	41.103	1.00	30.01	C
ATOM	1673	CD1	TYR A 345	61.847	50.407	41.508	1.00	29.92	C
ATOM	1674	CD2	TYR A 345	63.032	48.499	40.675	1.00	29.79	C
ATOM	1675	CE1	TYR A 345	60.658	49.690	41.476	1.00	30.21	C
ATOM	1676	CE2	TYR A 345	61.843	47.770	40.641	1.00	30.08	C
ATOM	1677	CZ	TYR A 345	60.662	48.376	41.040	1.00	30.51	C
ATOM	1678	OH	TYR A 345	59.479	47.685	40.978	1.00	31.68	O
ATOM	1679	N	PHE A 346	66.726	48.996	42.298	1.00	31.26	N
ATOM	1680	CA	PHE A 346	67.351	47.717	42.619	1.00	32.37	C
ATOM	1681	C	PHE A 346	67.722	47.651	44.102	1.00	33.09	C
ATOM	1682	O	PHE A 346	67.528	46.630	44.754	1.00	32.99	O
ATOM	1683	CB	PHE A 346	68.613	47.509	41.781	1.00	32.81	C
ATOM	1684	CG	PHE A 346	69.374	46.269	42.141	1.00	33.53	C
ATOM	1685	CD1	PHE A 346	68.841	45.011	41.881	1.00	33.63	C
ATOM	1686	CD2	PHE A 346	70.608	46.357	42.777	1.00	34.62	C
ATOM	1687	CE1	PHE A 346	69.519	43.858	42.246	1.00	34.10	C
ATOM	1688	CE2	PHE A 346	71.301	45.206	43.152	1.00	35.41	C
ATOM	1689	CZ	PHE A 346	70.750	43.950	42.883	1.00	35.25	C
ATOM	1690	N	GLU A 347	68.260	48.745	44.626	1.00	33.99	N
ATOM	1691	CA	GLU A 347	68.646	48.803	46.026	1.00	35.45	C

TABLE 5

ATOM	1692	C	GLU A 347	67.435	48.732	46.958	1.00	35.29	C
ATOM	1693	O	GLU A 347	67.540	48.231	48.075	1.00	35.27	O
ATOM	1694	CB	GLU A 347	69.429	50.088	46.312	1.00	36.72	C
ATOM	1695	CG	GLU A 347	70.769	50.204	45.594	1.00	40.50	C
ATOM	1696	CD	GLU A 347	71.714	49.039	45.888	1.00	42.72	C
ATOM	1697	OE1	GLU A 347	71.826	48.625	47.069	1.00	44.09	O
ATOM	1698	OE2	GLU A 347	72.360	48.544	44.935	1.00	44.09	O
ATOM	1699	N	GLU A 348	66.287	49.225	46.504	1.00	35.07	N
ATOM	1700	CA	GLU A 348	65.089	49.221	47.337	1.00	35.42	C
ATOM	1701	C	GLU A 348	64.306	47.914	47.303	1.00	34.55	C
ATOM	1702	O	GLU A 348	63.739	47.502	48.309	1.00	34.49	O
ATOM	1703	CB	GLU A 348	64.127	50.339	46.915	1.00	37.00	C
ATOM	1704	CG	GLU A 348	64.759	51.699	46.683	1.00	39.47	C
ATOM	1705	CD	GLU A 348	63.750	52.738	46.194	1.00	40.68	C
ATOM	1706	OE1	GLU A 348	62.928	52.416	45.308	1.00	41.24	O
ATOM	1707	OE2	GLU A 348	63.788	53.883	46.690	1.00	41.95	O
ATOM	1708	N	THR A 349	64.281	47.266	46.143	1.00	33.77	N
ATOM	1709	CA	THR A 349	63.501	46.049	45.957	1.00	32.68	C
ATOM	1710	C	THR A 349	64.277	44.756	45.706	1.00	32.25	C
ATOM	1711	O	THR A 349	63.717	43.670	45.813	1.00	32.24	O
ATOM	1712	CB	THR A 349	62.534	46.231	44.770	1.00	32.69	C
ATOM	1713	OG1	THR A 349	63.296	46.372	43.562	1.00	32.06	O
ATOM	1714	CG2	THR A 349	61.678	47.481	44.959	1.00	32.19	C
ATOM	1715	N	GLY A 350	65.554	44.867	45.363	1.00	31.82	N
ATOM	1716	CA	GLY A 350	66.335	43.678	45.072	1.00	30.66	C
ATOM	1717	C	GLY A 350	66.068	43.202	43.648	1.00	29.93	C
ATOM	1718	O	GLY A 350	66.557	42.157	43.220	1.00	30.20	O
ATOM	1719	N	ILE A 351	65.287	43.978	42.906	1.00	28.99	N
ATOM	1720	CA	ILE A 351	64.950	43.633	41.529	1.00	27.61	C
ATOM	1721	C	ILE A 351	65.773	44.447	40.538	1.00	26.84	C
ATOM	1722	O	ILE A 351	65.744	45.675	40.558	1.00	26.06	O
ATOM	1723	CB	ILE A 351	63.459	43.901	41.239	1.00	27.81	C
ATOM	1724	CG1	ILE A 351	62.588	43.128	42.233	1.00	27.74	C
ATOM	1725	CG2	ILE A 351	63.123	43.498	39.802	1.00	27.06	C
ATOM	1726	CD1	ILE A 351	61.150	43.611	42.277	1.00	27.83	C
ATOM	1727	N	TYR A 352	66.518	43.757	39.681	1.00	26.12	N
ATOM	1728	CA	TYR A 352	67.323	44.431	38.675	1.00	25.65	C
ATOM	1729	C	TYR A 352	66.570	44.364	37.358	1.00	25.14	C
ATOM	1730	O	TYR A 352	66.344	43.279	36.829	1.00	25.00	O
ATOM	1731	CB	TYR A 352	68.682	43.754	38.490	1.00	24.90	C
ATOM	1732	CG	TYR A 352	69.562	44.497	37.502	1.00	24.91	C
ATOM	1733	CD1	TYR A 352	70.365	45.561	37.915	1.00	24.55	C
ATOM	1734	CD2	TYR A 352	69.574	44.150	36.152	1.00	24.86	C
ATOM	1735	CE1	TYR A 352	71.161	46.258	37.010	1.00	25.05	C
ATOM	1736	CE2	TYR A 352	70.371	44.843	35.234	1.00	24.70	C
ATOM	1737	CZ	TYR A 352	71.161	45.892	35.670	1.00	24.84	C
ATOM	1738	OH	TYR A 352	71.976	46.555	34.783	1.00	24.66	O
ATOM	1739	N	ILE A 353	66.181	45.522	36.835	1.00	25.14	N
ATOM	1740	CA	ILE A 353	65.455	45.581	35.574	1.00	24.39	C
ATOM	1741	C	ILE A 353	66.364	46.094	34.467	1.00	24.46	C
ATOM	1742	O	ILE A 353	66.838	47.229	34.519	1.00	24.61	O
ATOM	1743	CB	ILE A 353	64.234	46.515	35.678	1.00	25.03	C
ATOM	1744	CG1	ILE A 353	63.298	46.017	36.786	1.00	24.96	C
ATOM	1745	CG2	ILE A 353	63.499	46.567	34.336	1.00	24.60	C
ATOM	1746	CD1	ILE A 353	62.097	46.889	37.009	1.00	25.74	C
ATOM	1747	N	PRO A 354	66.635	45.256	33.453	1.00	24.02	N
ATOM	1748	CA	PRO A 354	67.504	45.700	32.356	1.00	23.55	C

ATOM	1749	C	PRO	A	354	66.849	46.858	31.617	1.00	23.06	C
ATOM	1750	O	PRO	A	354	65.627	46.896	31.491	1.00	23.02	O
ATOM	1751	CB	PRO	A	354	67.619	44.454	31.470	1.00	23.02	C
ATOM	1752	CG	PRO	A	354	67.455	43.318	32.455	1.00	23.37	C
ATOM	1753	CD	PRO	A	354	66.323	43.819	33.334	1.00	23.29	C
ATOM	1754	N	VAL	A	355	67.652	47.807	31.142	1.00	22.63	N
ATOM	1755	CA	VAL	A	355	67.107	48.929	30.398	1.00	22.20	C
ATOM	1756	C	VAL	A	355	67.732	48.959	29.011	1.00	22.50	C
ATOM	1757	O	VAL	A	355	68.885	48.573	28.817	1.00	22.33	O
ATOM	1758	CB	VAL	A	355	67.318	50.296	31.134	1.00	21.96	C
ATOM	1759	CG1	VAL	A	355	66.618	50.258	32.483	1.00	20.76	C
ATOM	1760	CG2	VAL	A	355	68.806	50.617	31.293	1.00	20.60	C
ATOM	1761	N	CYS	A	356	66.950	49.408	28.044	1.00	23.02	N
ATOM	1762	CA	CYS	A	356	67.394	49.457	26.667	1.00	23.36	C
ATOM	1763	C	CYS	A	356	67.484	50.882	26.130	1.00	23.39	C
ATOM	1764	O	CYS	A	356	66.510	51.633	26.191	1.00	22.96	O
ATOM	1765	CB	CYS	A	356	66.422	48.643	25.801	1.00	23.63	C
ATOM	1766	SG	CYS	A	356	66.671	48.801	24.017	1.00	24.61	S
ATOM	1767	N	SER	A	357	68.657	51.255	25.621	1.00	23.18	N
ATOM	1768	CA	SER	A	357	68.819	52.577	25.033	1.00	23.61	C
ATOM	1769	C	SER	A	357	68.312	52.425	23.601	1.00	23.62	C
ATOM	1770	O	SER	A	357	68.930	51.746	22.783	1.00	23.43	O
ATOM	1771	CB	SER	A	357	70.283	53.013	25.027	1.00	23.25	C
ATOM	1772	OG	SER	A	357	70.387	54.322	24.490	1.00	23.60	O
ATOM	1773	N	ASP	A	358	67.177	53.051	23.315	1.00	24.07	N
ATOM	1774	CA	ASP	A	358	66.554	52.951	21.998	1.00	25.02	C
ATOM	1775	C	ASP	A	358	66.654	54.226	21.164	1.00	25.69	C
ATOM	1776	O	ASP	A	358	66.047	55.244	21.494	1.00	24.92	O
ATOM	1777	CB	ASP	A	358	65.081	52.549	22.182	1.00	24.37	C
ATOM	1778	CG	ASP	A	358	64.336	52.369	20.867	1.00	24.57	C
ATOM	1779	OD1	ASP	A	358	64.978	52.209	19.804	1.00	24.40	O
ATOM	1780	OD2	ASP	A	358	63.088	52.369	20.909	1.00	24.16	O
ATOM	1781	N	GLY	A	359	67.427	54.151	20.083	1.00	27.42	N
ATOM	1782	CA	GLY	A	359	67.585	55.281	19.186	1.00	29.54	C
ATOM	1783	C	GLY	A	359	68.670	56.272	19.559	1.00	31.70	C
ATOM	1784	O	GLY	A	359	69.235	56.224	20.652	1.00	32.10	O
ATOM	1785	N	GLY	A	360	68.975	57.171	18.631	1.00	33.51	N
ATOM	1786	CA	GLY	A	360	69.983	58.183	18.883	1.00	35.62	C
ATOM	1787	C	GLY	A	360	71.415	57.733	18.679	1.00	36.94	C
ATOM	1788	O	GLY	A	360	72.343	58.451	19.049	1.00	37.99	O
ATOM	1789	N	ILE	A	361	71.611	56.552	18.105	1.00	38.04	N
ATOM	1790	CA	ILE	A	361	72.962	56.069	17.871	1.00	39.16	C
ATOM	1791	C	ILE	A	361	73.376	56.307	16.426	1.00	40.31	C
ATOM	1792	O	ILE	A	361	72.908	55.631	15.502	1.00	40.46	O
ATOM	1793	CB	ILE	A	361	73.100	54.572	18.249	1.00	39.05	C
ATOM	1794	CG1	ILE	A	361	73.124	54.459	19.783	1.00	39.14	C
ATOM	1795	CG2	ILE	A	361	74.344	53.961	17.601	1.00	38.66	C
ATOM	1796	CD1	ILE	A	361	73.769	53.223	20.332	1.00	38.76	C
ATOM	1797	N	VAL	A	362	74.257	57.288	16.244	1.00	41.02	N
ATOM	1798	CA	VAL	A	362	74.746	57.655	14.924	1.00	41.61	C
ATOM	1799	C	VAL	A	362	76.048	56.942	14.566	1.00	41.66	C
ATOM	1800	O	VAL	A	362	76.193	56.430	13.455	1.00	42.31	O
ATOM	1801	CB	VAL	A	362	74.973	59.179	14.829	1.00	42.09	C
ATOM	1802	CG1	VAL	A	362	75.272	59.577	13.386	1.00	42.28	C
ATOM	1803	CG2	VAL	A	362	73.751	59.916	15.347	1.00	42.45	C
ATOM	1804	N	TYR	A	363	76.987	56.902	15.510	1.00	41.20	N
ATOM	1805	CA	TYR	A	363	78.282	56.260	15.283	1.00	40.38	C

TABLE 5

ATOM	1806	C	TYR	A	363	78.523	55.080	16.219	1.00	39.29	C
ATOM	1807	O	TYR	A	363	77.904	54.985	17.278	1.00	38.90	O
ATOM	1808	CB	TYR	A	363	79.396	57.293	15.454	1.00	41.48	C
ATOM	1809	CG	TYR	A	363	79.233	58.478	14.535	1.00	43.32	C
ATOM	1810	CD1	TYR	A	363	79.265	58.315	13.150	1.00	44.27	C
ATOM	1811	CD2	TYR	A	363	79.001	59.755	15.045	1.00	44.05	C
ATOM	1812	CE1	TYR	A	363	79.067	59.392	12.293	1.00	45.45	C
ATOM	1813	CE2	TYR	A	363	78.801	60.841	14.197	1.00	45.25	C
ATOM	1814	CZ	TYR	A	363	78.836	60.652	12.822	1.00	45.68	C
ATOM	1815	OH	TYR	A	363	78.647	61.719	11.972	1.00	47.00	O
ATOM	1816	N	ASP	A	364	79.425	54.182	15.828	1.00	37.99	N
ATOM	1817	CA	ASP	A	364	79.731	53.016	16.649	1.00	36.91	C
ATOM	1818	C	ASP	A	364	80.088	53.368	18.089	1.00	35.76	C
ATOM	1819	O	ASP	A	364	79.629	52.701	19.018	1.00	35.85	O
ATOM	1820	CB	ASP	A	364	80.892	52.202	16.062	1.00	37.35	C
ATOM	1821	CG	ASP	A	364	80.504	51.412	14.824	1.00	37.70	C
ATOM	1822	OD1	ASP	A	364	79.312	51.080	14.647	1.00	37.53	O
ATOM	1823	OD2	ASP	A	364	81.417	51.102	14.033	1.00	38.32	O
ATOM	1824	N	TYR	A	365	80.898	54.407	18.283	1.00	34.01	N
ATOM	1825	CA	TYR	A	365	81.304	54.771	19.638	1.00	33.07	C
ATOM	1826	C	TYR	A	365	80.131	55.199	20.524	1.00	31.99	C
ATOM	1827	O	TYR	A	365	80.255	55.228	21.745	1.00	31.66	O
ATOM	1828	CB	TYR	A	365	82.413	55.840	19.609	1.00	32.88	C
ATOM	1829	CG	TYR	A	365	81.962	57.282	19.513	1.00	33.91	C
ATOM	1830	CD1	TYR	A	365	81.650	58.015	20.660	1.00	33.73	C
ATOM	1831	CD2	TYR	A	365	81.883	57.927	18.278	1.00	34.01	C
ATOM	1832	CE1	TYR	A	365	81.275	59.357	20.578	1.00	34.76	C
ATOM	1833	CE2	TYR	A	365	81.507	59.268	18.184	1.00	34.68	C
ATOM	1834	CZ	TYR	A	365	81.206	59.977	19.335	1.00	34.89	C
ATOM	1835	OH	TYR	A	365	80.841	61.302	19.239	1.00	35.48	O
ATOM	1836	N	HIS	A	366	78.995	55.519	19.912	1.00	31.15	N
ATOM	1837	CA	HIS	A	366	77.807	55.886	20.680	1.00	30.50	C
ATOM	1838	C	HIS	A	366	77.305	54.640	21.411	1.00	29.58	C
ATOM	1839	O	HIS	A	366	76.639	54.742	22.439	1.00	28.57	O
ATOM	1840	CB	HIS	A	366	76.694	56.411	19.767	1.00	31.15	C
ATOM	1841	CG	HIS	A	366	76.918	57.806	19.275	1.00	32.03	C
ATOM	1842	ND1	HIS	A	366	77.928	58.613	19.753	1.00	32.57	N
ATOM	1843	CD2	HIS	A	366	76.227	58.557	18.383	1.00	32.25	C
ATOM	1844	CE1	HIS	A	366	77.848	59.800	19.179	1.00	32.26	C
ATOM	1845	NE2	HIS	A	366	76.824	59.793	18.346	1.00	32.44	N
ATOM	1846	N	MET	A	367	77.618	53.466	20.861	1.00	28.34	N
ATOM	1847	CA	MET	A	367	77.215	52.201	21.475	1.00	27.90	C
ATOM	1848	C	MET	A	367	77.951	52.050	22.801	1.00	26.79	C
ATOM	1849	O	MET	A	367	77.350	51.752	23.829	1.00	26.19	O
ATOM	1850	CB	MET	A	367	77.573	51.008	20.577	1.00	27.81	C
ATOM	1851	CG	MET	A	367	76.771	50.894	19.285	1.00	28.28	C
ATOM	1852	SD	MET	A	367	77.371	49.505	18.270	1.00	29.89	S
ATOM	1853	CE	MET	A	367	76.390	49.722	16.782	1.00	29.69	C
ATOM	1854	N	THR	A	368	79.262	52.256	22.758	1.00	26.73	N
ATOM	1855	CA	THR	A	368	80.095	52.142	23.945	1.00	26.43	C
ATOM	1856	C	THR	A	368	79.609	53.141	24.993	1.00	26.11	C
ATOM	1857	O	THR	A	368	79.501	52.804	26.168	1.00	26.83	O
ATOM	1858	CB	THR	A	368	81.572	52.399	23.592	1.00	26.81	C
ATOM	1859	OG1	THR	A	368	81.911	51.638	22.424	1.00	26.87	O
ATOM	1860	CG2	THR	A	368	82.480	51.975	24.738	1.00	26.28	C
ATOM	1861	N	LEU	A	369	79.302	54.362	24.565	1.00	25.06	N
ATOM	1862	CA	LEU	A	369	78.801	55.380	25.482	1.00	24.58	C

TABLE 5

ATOM	1863	C	LEU A 369	77.494	54.938	26.142	1.00	23.99	C
ATOM	1864	O	LEU A 369	77.352	55.015	27.360	1.00	23.70	O
ATOM	1865	CB	LEU A 369	78.567	56.706	24.744	1.00	24.31	C
ATOM	1866	CG	LEU A 369	79.799	57.572	24.453	1.00	25.45	C
ATOM	1867	CD1	LEU A 369	79.369	58.829	23.700	1.00	24.63	C
ATOM	1868	CD2	LEU A 369	80.494	57.952	25.770	1.00	24.55	C
ATOM	1869	N	ALA A 370	76.544	54.478	25.330	1.00	23.02	N
ATOM	1870	CA	ALA A 370	75.250	54.031	25.833	1.00	22.95	C
ATOM	1871	C	ALA A 370	75.427	52.936	26.885	1.00	22.49	C
ATOM	1872	O	ALA A 370	74.777	52.951	27.930	1.00	22.45	O
ATOM	1873	CB	ALA A 370	74.380	53.519	24.674	1.00	21.80	C
ATOM	1874	N	LEU A 371	76.311	51.987	26.604	1.00	22.45	N
ATOM	1875	CA	LEU A 371	76.561	50.902	27.539	1.00	22.46	C
ATOM	1876	C	LEU A 371	77.268	51.435	28.793	1.00	22.58	C
ATOM	1877	O	LEU A 371	76.910	51.071	29.912	1.00	22.70	O
ATOM	1878	CB	LEU A 371	77.407	49.810	26.863	1.00	22.22	C
ATOM	1879	CG	LEU A 371	76.777	49.111	25.644	1.00	23.05	C
ATOM	1880	CD1	LEU A 371	77.821	48.224	24.960	1.00	23.28	C
ATOM	1881	CD2	LEU A 371	75.570	48.278	26.074	1.00	22.74	C
ATOM	1882	N	ALA A 372	78.259	52.306	28.607	1.00	22.30	N
ATOM	1883	CA	ALA A 372	79.001	52.863	29.736	1.00	22.69	C
ATOM	1884	C	ALA A 372	78.100	53.669	30.663	1.00	23.09	C
ATOM	1885	O	ALA A 372	78.320	53.705	31.874	1.00	22.83	O
ATOM	1886	CB	ALA A 372	80.140	53.738	29.236	1.00	22.43	C
ATOM	1887	N	MET A 373	77.087	54.316	30.091	1.00	23.19	N
ATOM	1888	CA	MET A 373	76.159	55.113	30.883	1.00	23.33	C
ATOM	1889	C	MET A 373	75.140	54.272	31.654	1.00	23.50	C
ATOM	1890	O	MET A 373	74.361	54.813	32.431	1.00	23.61	O
ATOM	1891	CB	MET A 373	75.437	56.127	29.992	1.00	23.33	C
ATOM	1892	CG	MET A 373	76.355	57.212	29.437	1.00	23.20	C
ATOM	1893	SD	MET A 373	75.548	58.296	28.242	1.00	24.70	S
ATOM	1894	CE	MET A 373	76.895	59.426	27.833	1.00	23.13	C
ATOM	1895	N	GLY A 374	75.135	52.956	31.437	1.00	23.73	N
ATOM	1896	CA	GLY A 374	74.210	52.108	32.174	1.00	23.47	C
ATOM	1897	C	GLY A 374	73.258	51.222	31.386	1.00	23.98	C
ATOM	1898	O	GLY A 374	72.709	50.266	31.941	1.00	24.30	O
ATOM	1899	N	ALA A 375	73.034	51.533	30.113	1.00	23.43	N
ATOM	1900	CA	ALA A 375	72.147	50.713	29.296	1.00	24.14	C
ATOM	1901	C	ALA A 375	72.716	49.298	29.212	1.00	24.24	C
ATOM	1902	O	ALA A 375	73.916	49.118	29.022	1.00	24.62	O
ATOM	1903	CB	ALA A 375	72.010	51.302	27.898	1.00	22.91	C
ATOM	1904	N	ASP A 376	71.848	48.304	29.369	1.00	24.28	N
ATOM	1905	CA	ASP A 376	72.248	46.905	29.301	1.00	24.39	C
ATOM	1906	C	ASP A 376	72.343	46.495	27.839	1.00	24.24	C
ATOM	1907	O	ASP A 376	73.206	45.708	27.455	1.00	24.28	O
ATOM	1908	CB	ASP A 376	71.227	46.042	30.040	1.00	24.71	C
ATOM	1909	CG	ASP A 376	71.144	46.385	31.518	1.00	25.23	C
ATOM	1910	OD1	ASP A 376	71.931	45.821	32.307	1.00	25.91	O
ATOM	1911	OD2	ASP A 376	70.304	47.234	31.890	1.00	25.50	O
ATOM	1912	N	PHE A 377	71.432	47.011	27.025	1.00	24.62	N
ATOM	1913	CA	PHE A 377	71.472	46.728	25.604	1.00	25.19	C
ATOM	1914	C	PHE A 377	70.944	47.899	24.795	1.00	25.15	C
ATOM	1915	O	PHE A 377	70.363	48.838	25.341	1.00	25.14	O
ATOM	1916	CB	PHE A 377	70.754	45.413	25.240	1.00	24.88	C
ATOM	1917	CG	PHE A 377	69.354	45.301	25.750	1.00	25.68	C
ATOM	1918	CD1	PHE A 377	69.105	44.892	27.056	1.00	25.76	C
ATOM	1919	CD2	PHE A 377	68.274	45.533	24.901	1.00	25.64	C

TABLE 5

ATOM	1920	CE1	PHE	A	377	67.795	44.709	27.512	1.00	25.70	C
ATOM	1921	CE2	PHE	A	377	66.961	45.353	25.346	1.00	25.63	C
ATOM	1922	CZ	PHE	A	377	66.724	44.939	26.653	1.00	26.08	C
ATOM	1923	N	ILE	A	378	71.159	47.827	23.488	1.00	25.27	N
ATOM	1924	CA	ILE	A	378	70.802	48.895	22.575	1.00	25.00	C
ATOM	1925	C	ILE	A	378	69.858	48.454	21.466	1.00	25.29	C
ATOM	1926	O	ILE	A	378	70.023	47.379	20.895	1.00	25.10	O
ATOM	1927	CB	ILE	A	378	72.099	49.445	21.936	1.00	25.25	C
ATOM	1928	CG1	ILE	A	378	73.083	49.820	23.043	1.00	24.86	C
ATOM	1929	CG2	ILE	A	378	71.802	50.659	21.052	1.00	25.15	C
ATOM	1930	CD1	ILE	A	378	74.499	49.981	22.560	1.00	26.24	C
ATOM	1931	N	MET	A	379	68.859	49.285	21.177	1.00	25.26	N
ATOM	1932	CA	MET	A	379	67.922	48.996	20.101	1.00	25.45	C
ATOM	1933	C	MET	A	379	68.271	49.957	18.968	1.00	25.68	C
ATOM	1934	O	MET	A	379	68.464	51.147	19.199	1.00	25.94	O
ATOM	1935	CB	MET	A	379	66.467	49.208	20.546	1.00	25.00	C
ATOM	1936	CG	MET	A	379	65.466	48.982	19.413	1.00	24.97	C
ATOM	1937	SD	MET	A	379	63.735	48.885	19.881	1.00	24.78	S
ATOM	1938	CE	MET	A	379	63.630	47.182	20.459	1.00	24.64	C
ATOM	1939	N	LEU	A	380	68.367	49.443	17.747	1.00	26.01	N
ATOM	1940	CA	LEU	A	380	68.712	50.287	16.606	1.00	26.36	C
ATOM	1941	C	LEU	A	380	67.836	49.997	15.398	1.00	26.33	C
ATOM	1942	O	LEU	A	380	67.452	48.852	15.160	1.00	25.51	O
ATOM	1943	CB	LEU	A	380	70.183	50.090	16.208	1.00	26.63	C
ATOM	1944	CG	LEU	A	380	71.270	50.303	17.268	1.00	27.60	C
ATOM	1945	CD1	LEU	A	380	71.391	49.039	18.110	1.00	28.42	C
ATOM	1946	CD2	LEU	A	380	72.609	50.595	16.608	1.00	27.51	C
ATOM	1947	N	GLY	A	381	67.529	51.048	14.644	1.00	26.78	N
ATOM	1948	CA	GLY	A	381	66.720	50.907	13.446	1.00	27.90	C
ATOM	1949	C	GLY	A	381	67.566	51.146	12.206	1.00	28.83	C
ATOM	1950	O	GLY	A	381	67.879	50.215	11.465	1.00	28.61	O
ATOM	1951	N	ARG	A	382	67.950	52.399	11.991	1.00	30.04	N
ATOM	1952	CA	ARG	A	382	68.766	52.775	10.837	1.00	31.91	C
ATOM	1953	C	ARG	A	382	69.988	51.873	10.639	1.00	31.42	C
ATOM	1954	O	ARG	A	382	70.278	51.442	9.522	1.00	31.49	O
ATOM	1955	CB	ARG	A	382	69.220	54.232	10.971	1.00	34.20	C
ATOM	1956	CG	ARG	A	382	70.290	54.630	9.964	1.00	38.29	C
ATOM	1957	CD	ARG	A	382	70.947	55.962	10.312	1.00	41.29	C
ATOM	1958	NE	ARG	A	382	72.287	56.062	9.729	1.00	44.45	N
ATOM	1959	CZ	ARG	A	382	72.542	56.128	8.423	1.00	45.83	C
ATOM	1960	NH1	ARG	A	382	71.545	56.111	7.544	1.00	46.63	N
ATOM	1961	NH2	ARG	A	382	73.796	56.202	7.994	1.00	46.53	N
ATOM	1962	N	TYR	A	383	70.700	51.596	11.727	1.00	30.70	N
ATOM	1963	CA	TYR	A	383	71.892	50.753	11.692	1.00	29.42	C
ATOM	1964	C	TYR	A	383	71.652	49.421	10.978	1.00	29.27	C
ATOM	1965	O	TYR	A	383	72.448	49.013	10.128	1.00	29.04	O
ATOM	1966	CB	TYR	A	383	72.380	50.487	13.124	1.00	28.61	C
ATOM	1967	CG	TYR	A	383	73.607	49.602	13.223	1.00	27.85	C
ATOM	1968	CD1	TYR	A	383	74.894	50.134	13.107	1.00	27.60	C
ATOM	1969	CD2	TYR	A	383	73.479	48.228	13.419	1.00	27.75	C
ATOM	1970	CE1	TYR	A	383	76.020	49.317	13.185	1.00	27.67	C
ATOM	1971	CE2	TYR	A	383	74.592	47.403	13.495	1.00	27.39	C
ATOM	1972	CZ	TYR	A	383	75.859	47.948	13.377	1.00	27.90	C
ATOM	1973	OH	TYR	A	383	76.958	47.118	13.438	1.00	27.45	O
ATOM	1974	N	PHE	A	384	70.560	48.747	11.327	1.00	28.44	N
ATOM	1975	CA	PHE	A	384	70.232	47.454	10.733	1.00	28.47	C
ATOM	1976	C	PHE	A	384	69.521	47.555	9.381	1.00	28.91	C



TABLE 5

ATOM	1977	O	PHE	A	384	69.627	46.650	8.555	1.00	28.72	O
ATOM	1978	CB	PHE	A	384	69.375	46.636	11.705	1.00	27.39	C
ATOM	1979	CG	PHE	A	384	70.132	46.130	12.906	1.00	26.72	C
ATOM	1980	CD1	PHE	A	384	71.098	45.132	12.768	1.00	25.87	C
ATOM	1981	CD2	PHE	A	384	69.886	46.656	14.173	1.00	25.64	C
ATOM	1982	CE1	PHE	A	384	71.807	44.664	13.868	1.00	25.34	C
ATOM	1983	CE2	PHE	A	384	70.591	46.193	15.285	1.00	25.24	C
ATOM	1984	CZ	PHE	A	384	71.554	45.195	15.134	1.00	24.96	C
ATOM	1985	N	ALA	A	385	68.804	48.653	9.158	1.00	29.46	N
ATOM	1986	CA	ALA	A	385	68.081	48.852	7.905	1.00	30.43	C
ATOM	1987	C	ALA	A	385	69.024	48.849	6.701	1.00	31.20	C
ATOM	1988	O	ALA	A	385	68.626	48.506	5.592	1.00	31.54	O
ATOM	1989	CB	ALA	A	385	67.299	50.166	7.958	1.00	29.86	C
ATOM	1990	N	ARG	A	386	70.278	49.226	6.934	1.00	32.25	N
ATOM	1991	CA	ARG	A	386	71.291	49.281	5.883	1.00	32.76	C
ATOM	1992	C	ARG	A	386	71.725	47.907	5.381	1.00	33.11	C
ATOM	1993	O	ARG	A	386	72.310	47.794	4.305	1.00	32.93	O
ATOM	1994	CB	ARG	A	386	72.542	49.995	6.392	1.00	33.15	C
ATOM	1995	CG	ARG	A	386	72.363	51.434	6.832	1.00	34.37	C
ATOM	1996	CD	ARG	A	386	73.645	51.881	7.510	1.00	34.93	C
ATOM	1997	NE	ARG	A	386	74.002	50.939	8.567	1.00	36.03	N
ATOM	1998	CZ	ARG	A	386	75.245	50.652	8.938	1.00	36.05	C
ATOM	1999	NH1	ARG	A	386	76.278	51.233	8.338	1.00	35.62	N
ATOM	2000	NH2	ARG	A	386	75.451	49.774	9.910	1.00	35.65	N
ATOM	2001	N	PHE	A	387	71.447	46.867	6.158	1.00	33.64	N
ATOM	2002	CA	PHE	A	387	71.875	45.525	5.787	1.00	34.50	C
ATOM	2003	C	PHE	A	387	71.012	44.785	4.768	1.00	35.58	C
ATOM	2004	O	PHE	A	387	69.818	45.037	4.623	1.00	35.41	O
ATOM	2005	CB	PHE	A	387	72.040	44.665	7.046	1.00	33.89	C
ATOM	2006	CG	PHE	A	387	72.940	45.276	8.091	1.00	33.56	C
ATOM	2007	CD1	PHE	A	387	74.033	46.058	7.722	1.00	33.59	C
ATOM	2008	CD2	PHE	A	387	72.707	45.050	9.444	1.00	33.20	C
ATOM	2009	CE1	PHE	A	387	74.881	46.607	8.689	1.00	33.28	C
ATOM	2010	CE2	PHE	A	387	73.547	45.592	10.417	1.00	32.86	C
ATOM	2011	CZ	PHE	A	387	74.636	46.372	10.040	1.00	33.10	C
ATOM	2012	N	GLU	A	388	71.647	43.859	4.064	1.00	37.23	N
ATOM	2013	CA	GLU	A	388	70.979	43.061	3.048	1.00	38.92	C
ATOM	2014	C	GLU	A	388	69.769	42.341	3.632	1.00	38.75	C
ATOM	2015	O	GLU	A	388	68.737	42.209	2.972	1.00	38.22	O
ATOM	2016	CB	GLU	A	388	71.957	42.034	2.473	1.00	40.97	C
ATOM	2017	CG	GLU	A	388	71.424	41.264	1.272	1.00	44.75	C
ATOM	2018	CD	GLU	A	388	72.279	40.056	0.934	1.00	47.13	C
ATOM	2019	OE1	GLU	A	388	72.425	39.172	1.808	1.00	48.77	O
ATOM	2020	OE2	GLU	A	388	72.803	39.985	-0.202	1.00	48.96	O
ATOM	2021	N	GLU	A	389	69.899	41.886	4.876	1.00	38.62	N
ATOM	2022	CA	GLU	A	389	68.823	41.159	5.534	1.00	38.62	C
ATOM	2023	C	GLU	A	389	67.615	41.987	5.964	1.00	38.96	C
ATOM	2024	O	GLU	A	389	66.621	41.424	6.413	1.00	39.16	O
ATOM	2025	CB	GLU	A	389	69.369	40.375	6.732	1.00	37.80	C
ATOM	2026	CG	GLU	A	389	70.398	39.320	6.347	1.00	36.96	C
ATOM	2027	CD	GLU	A	389	71.834	39.798	6.504	1.00	36.79	C
ATOM	2028	OE1	GLU	A	389	72.100	41.004	6.310	1.00	36.41	O
ATOM	2029	OE2	GLU	A	389	72.704	38.958	6.808	1.00	35.78	O
ATOM	2030	N	SER	A	390	67.679	43.310	5.843	1.00	39.56	N
ATOM	2031	CA	SER	A	390	66.515	44.105	6.216	1.00	40.72	C
ATOM	2032	C	SER	A	390	65.467	43.815	5.138	1.00	41.70	C
ATOM	2033	O	SER	A	390	65.807	43.599	3.973	1.00	41.48	O

TABLE 5

ATOM	2034	CB	SER A 390	66.844	45.598	6.278	1.00	40.08	C
ATOM	2035	OG	SER A 390	67.105	46.130	5.000	1.00	40.77	O
ATOM	2036	N	PRO A 391	64.181	43.804	5.515	1.00	42.67	N
ATOM	2037	CA	PRO A 391	63.073	43.523	4.595	1.00	43.86	C
ATOM	2038	C	PRO A 391	62.716	44.593	3.567	1.00	44.88	C
ATOM	2039	O	PRO A 391	61.651	44.530	2.959	1.00	45.36	O
ATOM	2040	CB	PRO A 391	61.917	43.245	5.550	1.00	43.53	C
ATOM	2041	CG	PRO A 391	62.172	44.253	6.634	1.00	42.86	C
ATOM	2042	CD	PRO A 391	63.672	44.149	6.858	1.00	42.43	C
ATOM	2043	N	THR A 392	63.588	45.570	3.361	1.00	46.16	N
ATOM	2044	CA	THR A 392	63.280	46.619	2.402	1.00	47.44	C
ATOM	2045	C	THR A 392	63.962	46.419	1.057	1.00	48.73	C
ATOM	2046	O	THR A 392	64.940	45.680	0.939	1.00	48.53	O
ATOM	2047	CB	THR A 392	63.646	48.010	2.955	1.00	47.37	C
ATOM	2048	OG1	THR A 392	65.056	48.081	3.190	1.00	47.28	O
ATOM	2049	CG2	THR A 392	62.901	48.266	4.264	1.00	47.46	C
ATOM	2050	N	ARG A 393	63.430	47.085	0.041	1.00	50.37	N
ATOM	2051	CA	ARG A 393	63.966	46.980	-1.305	1.00	52.41	C
ATOM	2052	C	ARG A 393	65.285	47.716	-1.481	1.00	52.98	C
ATOM	2053	O	ARG A 393	65.459	48.846	-1.020	1.00	52.98	O
ATOM	2054	CB	ARG A 393	62.936	47.494	-2.318	1.00	53.44	C
ATOM	2055	CG	ARG A 393	61.734	46.567	-2.475	1.00	54.94	C
ATOM	2056	CD	ARG A 393	60.591	47.199	-3.269	1.00	56.14	C
ATOM	2057	NE	ARG A 393	61.022	47.742	-4.554	1.00	57.05	N
ATOM	2058	CZ	ARG A 393	61.422	48.997	-4.739	1.00	57.73	C
ATOM	2059	NH1	ARG A 393	61.444	49.848	-3.720	1.00	58.03	N
ATOM	2060	NH2	ARG A 393	61.803	49.402	-5.943	1.00	58.01	N
ATOM	2061	N	LYS A 394	66.220	47.046	-2.141	1.00	53.68	N
ATOM	2062	CA	LYS A 394	67.526	47.616	-2.417	1.00	54.28	C
ATOM	2063	C	LYS A 394	67.338	48.454	-3.674	1.00	54.83	C
ATOM	2064	O	LYS A 394	66.910	47.943	-4.704	1.00	54.68	O
ATOM	2065	CB	LYS A 394	68.532	46.495	-2.670	1.00	53.95	C
ATOM	2066	CG	LYS A 394	69.979	46.924	-2.607	1.00	53.65	C
ATOM	2067	CD	LYS A 394	70.900	45.769	-2.961	1.00	53.38	C
ATOM	2068	CE	LYS A 394	70.731	44.601	-2.009	1.00	52.92	C
ATOM	2069	NZ	LYS A 394	71.581	43.452	-2.415	1.00	52.51	N
ATOM	2070	N	VAL A 395	67.640	49.742	-3.585	1.00	55.84	N
ATOM	2071	CA	VAL A 395	67.471	50.629	-4.724	1.00	57.03	C
ATOM	2072	C	VAL A 395	68.749	51.379	-5.052	1.00	57.77	C
ATOM	2073	O	VAL A 395	69.439	51.859	-4.159	1.00	58.06	O
ATOM	2074	CB	VAL A 395	66.352	51.653	-4.457	1.00	57.18	C
ATOM	2075	CG1	VAL A 395	66.227	52.612	-5.632	1.00	57.63	C
ATOM	2076	CG2	VAL A 395	65.036	50.926	-4.220	1.00	57.44	C
ATOM	2077	N	THR A 396	69.055	51.480	-6.340	1.00	58.78	N
ATOM	2078	CA	THR A 396	70.255	52.176	-6.786	1.00	59.74	C
ATOM	2079	C	THR A 396	69.940	53.611	-7.189	1.00	60.37	C
ATOM	2080	O	THR A 396	69.146	53.851	-8.096	1.00	60.74	O
ATOM	2081	CB	THR A 396	70.900	51.466	-7.989	1.00	59.62	C
ATOM	2082	OG1	THR A 396	71.197	50.110	-7.639	1.00	59.68	O
ATOM	2083	CG2	THR A 396	72.184	52.173	-8.394	1.00	59.73	C
ATOM	2084	N	ILE A 397	70.565	54.559	-6.502	1.00	61.02	N
ATOM	2085	CA	ILE A 397	70.366	55.974	-6.783	1.00	61.57	C
ATOM	2086	C	ILE A 397	71.659	56.562	-7.342	1.00	61.67	C
ATOM	2087	O	ILE A 397	72.589	56.872	-6.595	1.00	61.90	O
ATOM	2088	CB	ILE A 397	69.962	56.744	-5.506	1.00	61.92	C
ATOM	2089	CG1	ILE A 397	68.655	56.173	-4.950	1.00	62.18	C
ATOM	2090	CG2	ILE A 397	69.792	58.223	-5.817	1.00	62.12	C

ATOM	2091	CD1	ILE	A	397	68.171	56.858	-3.689	1.00	62.37	C
ATOM	2092	N	ASN	A	398	71.700	56.708	-8.663	1.00	61.56	N
ATOM	2093	CA	ASN	A	398	72.856	57.247	-9.375	1.00	61.04	C
ATOM	2094	C	ASN	A	398	74.211	56.789	-8.831	1.00	60.11	C
ATOM	2095	O	ASN	A	398	74.960	57.570	-8.239	1.00	60.00	O
ATOM	2096	CB	ASN	A	398	72.795	58.784	-9.415	1.00	62.12	C
ATOM	2097	CG	ASN	A	398	72.965	59.425	-8.047	1.00	62.95	C
ATOM	2098	OD1	ASN	A	398	72.154	59.222	-7.145	1.00	63.58	O
ATOM	2099	ND2	ASN	A	398	74.026	60.216	-7.892	1.00	63.27	N
ATOM	2100	N	GLY	A	399	74.516	55.512	-9.039	1.00	58.84	N
ATOM	2101	CA	GLY	A	399	75.786	54.965	-8.593	1.00	57.27	C
ATOM	2102	C	GLY	A	399	75.861	54.494	-7.153	1.00	56.12	C
ATOM	2103	O	GLY	A	399	76.847	53.867	-6.761	1.00	56.17	O
ATOM	2104	N	SER	A	400	74.835	54.788	-6.359	1.00	54.73	N
ATOM	2105	CA	SER	A	400	74.832	54.379	-4.957	1.00	52.89	C
ATOM	2106	C	SER	A	400	73.686	53.444	-4.603	1.00	51.55	C
ATOM	2107	O	SER	A	400	72.517	53.775	-4.785	1.00	51.45	O
ATOM	2108	CB	SER	A	400	74.779	55.608	-4.047	1.00	52.78	C
ATOM	2109	OG	SER	A	400	75.979	56.353	-4.134	1.00	52.96	O
ATOM	2110	N	VAL	A	401	74.030	52.268	-4.094	1.00	50.01	N
ATOM	2111	CA	VAL	A	401	73.025	51.298	-3.697	1.00	48.59	C
ATOM	2112	C	VAL	A	401	72.507	51.704	-2.320	1.00	48.17	C
ATOM	2113	O	VAL	A	401	73.275	51.816	-1.360	1.00	47.91	O
ATOM	2114	CB	VAL	A	401	73.620	49.883	-3.637	1.00	48.31	C
ATOM	2115	CG1	VAL	A	401	72.563	48.892	-3.182	1.00	47.71	C
ATOM	2116	CG2	VAL	A	401	74.167	49.499	-5.007	1.00	47.95	C
ATOM	2117	N	MET	A	402	71.202	51.941	-2.238	1.00	47.38	N
ATOM	2118	CA	MET	A	402	70.566	52.360	-0.998	1.00	46.51	C
ATOM	2119	C	MET	A	402	69.492	51.365	-0.589	1.00	45.72	C
ATOM	2120	O	MET	A	402	69.161	50.440	-1.333	1.00	45.52	O
ATOM	2121	CB	MET	A	402	69.893	53.724	-1.179	1.00	47.39	C
ATOM	2122	CG	MET	A	402	70.722	54.785	-1.882	1.00	47.80	C
ATOM	2123	SD	MET	A	402	72.046	55.436	-0.875	1.00	49.53	S
ATOM	2124	CE	MET	A	402	71.130	56.502	0.246	1.00	48.12	C
ATOM	2125	N	LYS	A	403	68.953	51.568	0.606	1.00	44.48	N
ATOM	2126	CA	LYS	A	403	67.879	50.735	1.118	1.00	43.18	C
ATOM	2127	C	LYS	A	403	66.843	51.671	1.713	1.00	42.91	C
ATOM	2128	O	LYS	A	403	67.178	52.736	2.232	1.00	42.51	O
ATOM	2129	CB	LYS	A	403	68.387	49.759	2.180	1.00	42.62	C
ATOM	2130	CG	LYS	A	403	69.316	48.691	1.632	1.00	41.97	C
ATOM	2131	CD	LYS	A	403	69.087	47.352	2.306	1.00	41.27	C
ATOM	2132	CE	LYS	A	403	67.729	46.777	1.941	1.00	40.54	C
ATOM	2133	NZ	LYS	A	403	67.534	45.407	2.492	1.00	39.50	N
ATOM	2134	N	GLU	A	404	65.580	51.280	1.622	1.00	42.89	N
ATOM	2135	CA	GLU	A	404	64.500	52.097	2.146	1.00	42.99	C
ATOM	2136	C	GLU	A	404	64.451	52.019	3.661	1.00	42.20	C
ATOM	2137	O	GLU	A	404	64.760	50.987	4.254	1.00	41.68	O
ATOM	2138	CB	GLU	A	404	63.166	51.623	1.580	1.00	44.40	C
ATOM	2139	CG	GLU	A	404	63.131	51.559	0.071	1.00	46.68	C
ATOM	2140	CD	GLU	A	404	61.810	51.042	-0.446	1.00	48.00	C
ATOM	2141	OE1	GLU	A	404	61.485	49.856	-0.191	1.00	49.02	O
ATOM	2142	OE2	GLU	A	404	61.095	51.827	-1.101	1.00	49.09	O
ATOM	2143	N	TYR	A	405	64.061	53.124	4.284	1.00	41.51	N
ATOM	2144	CA	TYR	A	405	63.949	53.180	5.729	1.00	40.50	C
ATOM	2145	C	TYR	A	405	62.918	54.221	6.123	1.00	40.07	C
ATOM	2146	O	TYR	A	405	63.100	55.416	5.882	1.00	40.71	O
ATOM	2147	CB	TYR	A	405	65.294	53.524	6.365	1.00	40.22	C

ATOM	2148	CG	TYR	A	405	65.231	53.579	7.872	1.00	40.08	C
ATOM	2149	CD1	TYR	A	405	64.847	52.463	8.611	1.00	39.84	C
ATOM	2150	CD2	TYR	A	405	65.539	54.750	8.561	1.00	40.31	C
ATOM	2151	CE1	TYR	A	405	64.771	52.508	9.998	1.00	39.70	C
ATOM	2152	CE2	TYR	A	405	65.466	54.807	9.949	1.00	40.16	C
ATOM	2153	CZ	TYR	A	405	65.080	53.681	10.659	1.00	39.81	C
ATOM	2154	OH	TYR	A	405	64.990	53.734	12.027	1.00	39.77	O
ATOM	2155	N	TRP	A	406	61.830	53.764	6.729	1.00	38.92	N
ATOM	2156	CA	TRP	A	406	60.773	54.666	7.153	1.00	38.11	C
ATOM	2157	C	TRP	A	406	60.373	54.354	8.588	1.00	38.26	C
ATOM	2158	O	TRP	A	406	60.439	53.202	9.026	1.00	37.61	O
ATOM	2159	CB	TRP	A	406	59.565	54.545	6.212	1.00	36.65	C
ATOM	2160	CG	TRP	A	406	58.932	53.186	6.184	1.00	35.15	C
ATOM	2161	CD1	TRP	A	406	57.972	52.715	7.028	1.00	34.75	C
ATOM	2162	CD2	TRP	A	406	59.246	52.111	5.293	1.00	34.82	C
ATOM	2163	NE1	TRP	A	406	57.667	51.414	6.722	1.00	34.33	N
ATOM	2164	CE2	TRP	A	406	58.437	51.015	5.661	1.00	34.71	C
ATOM	2165	CE3	TRP	A	406	60.135	51.965	4.218	1.00	34.73	C
ATOM	2166	CZ2	TRP	A	406	58.488	49.784	4.994	1.00	34.60	C
ATOM	2167	CZ3	TRP	A	406	60.186	50.740	3.551	1.00	34.68	C
ATOM	2168	CH2	TRP	A	406	59.366	49.666	3.946	1.00	34.70	C
ATOM	2169	N	GLY	A	407	59.978	55.392	9.316	1.00	38.58	N
ATOM	2170	CA	GLY	A	407	59.571	55.221	10.695	1.00	39.46	C
ATOM	2171	C	GLY	A	407	58.182	54.625	10.820	1.00	40.35	C
ATOM	2172	O	GLY	A	407	57.402	54.627	9.867	1.00	40.02	O
ATOM	2173	N	GLU	A	408	57.878	54.102	12.003	1.00	41.35	N
ATOM	2174	CA	GLU	A	408	56.578	53.506	12.271	1.00	42.48	C
ATOM	2175	C	GLU	A	408	55.513	54.585	12.394	1.00	43.53	C
ATOM	2176	O	GLU	A	408	54.320	54.302	12.334	1.00	43.54	O
ATOM	2177	CB	GLU	A	408	56.641	52.682	13.555	1.00	42.13	C
ATOM	2178	CG	GLU	A	408	57.446	51.408	13.410	1.00	41.70	C
ATOM	2179	CD	GLU	A	408	56.789	50.416	12.464	1.00	41.39	C
ATOM	2180	OE1	GLU	A	408	55.688	49.927	12.785	1.00	41.50	O
ATOM	2181	OE2	GLU	A	408	57.370	50.126	11.401	1.00	40.96	O
ATOM	2182	N	GLY	A	409	55.954	55.827	12.562	1.00	45.08	N
ATOM	2183	CA	GLY	A	409	55.022	56.932	12.681	1.00	47.32	C
ATOM	2184	C	GLY	A	409	54.711	57.588	11.345	1.00	48.91	C
ATOM	2185	O	GLY	A	409	53.891	58.502	11.274	1.00	48.67	O
ATOM	2186	N	SER	A	410	55.365	57.130	10.281	1.00	50.68	N
ATOM	2187	CA	SER	A	410	55.132	57.699	8.958	1.00	52.76	C
ATOM	2188	C	SER	A	410	53.849	57.131	8.373	1.00	54.23	C
ATOM	2189	O	SER	A	410	53.454	56.008	8.689	1.00	53.75	O
ATOM	2190	CB	SER	A	410	56.301	57.394	8.015	1.00	52.65	C
ATOM	2191	OG	SER	A	410	56.325	56.026	7.646	1.00	53.09	O
ATOM	2192	N	SER	A	411	53.200	57.918	7.520	1.00	56.27	N
ATOM	2193	CA	SER	A	411	51.960	57.493	6.889	1.00	58.56	C
ATOM	2194	C	SER	A	411	52.188	56.213	6.088	1.00	60.08	C
ATOM	2195	O	SER	A	411	51.270	55.406	5.916	1.00	60.54	O
ATOM	2196	CB	SER	A	411	51.430	58.600	5.973	1.00	58.70	C
ATOM	2197	OG	SER	A	411	52.376	58.934	4.974	1.00	59.09	O
ATOM	2198	N	ARG	A	412	53.418	56.027	5.612	1.00	61.61	N
ATOM	2199	CA	ARG	A	412	53.770	54.844	4.831	1.00	63.31	C
ATOM	2200	C	ARG	A	412	53.527	53.549	5.609	1.00	64.68	C
ATOM	2201	O	ARG	A	412	53.565	52.457	5.043	1.00	64.66	O
ATOM	2202	CB	ARG	A	412	55.236	54.921	4.385	1.00	62.76	C
ATOM	2203	CG	ARG	A	412	55.694	53.712	3.581	1.00	62.41	C
ATOM	2204	CD	ARG	A	412	57.020	53.948	2.877	1.00	61.98	C

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ATOM	2205	NE	ARG	A	412	57.408	52.776	2.097	1.00	61.77	N
ATOM	2206	CZ	ARG	A	412	58.493	52.701	1.332	1.00	62.01	C
ATOM	2207	NH1	ARG	A	412	59.321	53.736	1.229	1.00	61.70	N
ATOM	2208	NH2	ARG	A	412	58.751	51.581	0.669	1.00	62.05	N
ATOM	2209	N	ALA	A	413	53.273	53.681	6.908	1.00	66.59	N
ATOM	2210	CA	ALA	A	413	53.016	52.532	7.770	1.00	68.37	C
ATOM	2211	C	ALA	A	413	51.774	52.795	8.617	1.00	69.80	C
ATOM	2212	O	ALA	A	413	50.907	53.587	8.232	1.00	70.13	O
ATOM	2213	CB	ALA	A	413	54.222	52.279	8.672	1.00	68.21	C
ATOM	2214	N	ARG	A	414	51.697	52.124	9.767	1.00	71.35	N
ATOM	2215	CA	ARG	A	414	50.586	52.267	10.715	1.00	72.93	C
ATOM	2216	C	ARG	A	414	49.190	52.288	10.097	1.00	73.77	C
ATOM	2217	O	ARG	A	414	48.213	52.609	10.774	1.00	73.88	O
ATOM	2218	CB	ARG	A	414	50.783	53.530	11.570	1.00	73.43	C
ATOM	2219	CG	ARG	A	414	51.031	54.815	10.779	1.00	74.17	C
ATOM	2220	CD	ARG	A	414	51.446	55.967	11.688	1.00	74.85	C
ATOM	2221	NE	ARG	A	414	50.307	56.638	12.308	1.00	75.54	N
ATOM	2222	CZ	ARG	A	414	49.508	57.492	11.675	1.00	75.93	C
ATOM	2223	NH1	ARG	A	414	49.724	57.784	10.398	1.00	76.05	N
ATOM	2224	NH2	ARG	A	414	48.495	58.059	12.319	1.00	76.11	N
ATOM	2225	N	ASN	A	415	49.098	51.936	8.819	1.00	74.50	N
ATOM	2226	CA	ASN	A	415	47.818	51.923	8.124	1.00	75.19	C
ATOM	2227	C	ASN	A	415	47.577	50.540	7.515	1.00	75.37	C
ATOM	2228	O	ASN	A	415	47.344	50.406	6.311	1.00	75.45	O
ATOM	2229	CB	ASN	A	415	47.809	52.996	7.028	1.00	75.72	C
ATOM	2230	CG	ASN	A	415	46.402	53.424	6.634	1.00	76.17	C
ATOM	2231	OD1	ASN	A	415	46.214	54.171	5.671	1.00	76.40	O
ATOM	2232	ND2	ASN	A	415	45.406	52.958	7.385	1.00	76.16	N
ATOM	2233	N	TRP	A	416	47.644	49.516	8.361	1.00	75.41	N
ATOM	2234	CA	TRP	A	416	47.437	48.136	7.931	1.00	75.40	C
ATOM	2235	C	TRP	A	416	46.062	47.625	8.366	1.00	75.38	C
ATOM	2236	O	TRP	A	416	45.571	47.959	9.448	1.00	75.34	O
ATOM	2237	CB	TRP	A	416	48.532	47.232	8.515	1.00	75.24	C
ATOM	2238	CG	TRP	A	416	48.733	47.426	9.990	1.00	74.99	C
ATOM	2239	CD1	TRP	A	416	49.406	48.449	10.599	1.00	74.96	C
ATOM	2240	CD2	TRP	A	416	48.190	46.620	11.044	1.00	74.76	C
ATOM	2241	NE1	TRP	A	416	49.311	48.333	11.966	1.00	74.83	N
ATOM	2242	CE2	TRP	A	416	48.570	47.220	12.267	1.00	74.77	C
ATOM	2243	CE3	TRP	A	416	47.415	45.453	11.075	1.00	74.57	C
ATOM	2244	CZ2	TRP	A	416	48.200	46.691	13.510	1.00	74.66	C
ATOM	2245	CZ3	TRP	A	416	47.047	44.927	12.313	1.00	74.66	C
ATOM	2246	CH2	TRP	A	416	47.442	45.549	13.513	1.00	74.65	C
ATOM	2247	N	GLU	A	431	54.518	61.394	12.341	1.00	65.44	N
ATOM	2248	CA	GLU	A	431	55.528	61.368	13.394	1.00	65.56	C
ATOM	2249	C	GLU	A	431	56.862	60.844	12.879	1.00	64.74	C
ATOM	2250	O	GLU	A	431	57.864	60.865	13.595	1.00	64.65	O
ATOM	2251	CB	GLU	A	431	55.072	60.484	14.557	1.00	66.48	C
ATOM	2252	CG	GLU	A	431	53.806	60.944	15.256	1.00	68.09	C
ATOM	2253	CD	GLU	A	431	53.483	60.087	16.469	1.00	69.15	C
ATOM	2254	OE1	GLU	A	431	53.319	58.854	16.306	1.00	69.66	O
ATOM	2255	OE2	GLU	A	431	53.397	60.647	17.586	1.00	69.60	O
ATOM	2256	N	GLY	A	432	56.873	60.368	11.641	1.00	63.84	N
ATOM	2257	CA	GLY	A	432	58.100	59.842	11.080	1.00	62.59	C
ATOM	2258	C	GLY	A	432	58.315	60.225	9.633	1.00	61.80	C
ATOM	2259	O	GLY	A	432	57.421	60.765	8.977	1.00	61.75	O
ATOM	2260	N	VAL	A	433	59.513	59.938	9.135	1.00	60.79	N
ATOM	2261	CA	VAL	A	433	59.867	60.246	7.758	1.00	59.34	C

ATOM	2262	C	VAL A 433	60.128	58.968	6.964	1.00	58.28	C
ATOM	2263	O	VAL A 433	60.193	57.874	7.527	1.00	58.02	O
ATOM	2264	CB	VAL A 433	61.124	61.149	7.700	1.00	59.34	C
ATOM	2265	CG1	VAL A 433	60.851	62.462	8.413	1.00	59.24	C
ATOM	2266	CG2	VAL A 433	62.309	60.442	8.336	1.00	59.25	C
ATOM	2267	N	ASP A 434	60.263	59.122	5.651	1.00	56.94	N
ATOM	2268	CA	ASP A 434	60.528	58.010	4.747	1.00	55.49	C
ATOM	2269	C	ASP A 434	61.778	58.380	3.957	1.00	54.43	C
ATOM	2270	O	ASP A 434	61.777	59.359	3.210	1.00	54.60	O
ATOM	2271	CB	ASP A 434	59.333	57.808	3.809	1.00	55.70	C
ATOM	2272	CG	ASP A 434	59.529	56.653	2.849	1.00	55.96	C
ATOM	2273	OD1	ASP A 434	59.987	55.578	3.288	1.00	56.51	O
ATOM	2274	OD2	ASP A 434	59.212	56.812	1.652	1.00	56.42	O
ATOM	2275	N	SER A 435	62.845	57.602	4.119	1.00	52.71	N
ATOM	2276	CA	SER A 435	64.099	57.908	3.440	1.00	50.99	C
ATOM	2277	C	SER A 435	64.910	56.705	2.962	1.00	49.63	C
ATOM	2278	O	SER A 435	64.416	55.581	2.891	1.00	48.99	O
ATOM	2279	CB	SER A 435	64.971	58.757	4.366	1.00	51.10	C
ATOM	2280	OG	SER A 435	65.160	58.097	5.608	1.00	50.72	O
ATOM	2281	N	TYR A 436	66.172	56.970	2.640	1.00	48.33	N
ATOM	2282	CA	TYR A 436	67.091	55.947	2.163	1.00	47.20	C
ATOM	2283	C	TYR A 436	68.375	55.936	2.984	1.00	45.70	C
ATOM	2284	O	TYR A 436	68.863	56.987	3.400	1.00	45.68	O
ATOM	2285	CB	TYR A 436	67.452	56.211	0.699	1.00	48.21	C
ATOM	2286	CG	TYR A 436	66.289	56.130	-0.260	1.00	49.01	C
ATOM	2287	CD1	TYR A 436	65.771	54.895	-0.656	1.00	49.13	C
ATOM	2288	CD2	TYR A 436	65.701	57.288	-0.769	1.00	49.35	C
ATOM	2289	CE1	TYR A 436	64.694	54.816	-1.538	1.00	49.77	C
ATOM	2290	CE2	TYR A 436	64.622	57.221	-1.650	1.00	49.98	C
ATOM	2291	CZ	TYR A 436	64.125	55.982	-2.029	1.00	49.99	C
ATOM	2292	OH	TYR A 436	63.054	55.911	-2.891	1.00	50.64	O
ATOM	2293	N	VAL A 437	68.913	54.743	3.214	1.00	43.68	N
ATOM	2294	CA	VAL A 437	70.164	54.591	3.944	1.00	41.96	C
ATOM	2295	C	VAL A 437	71.139	53.869	3.025	1.00	40.88	C
ATOM	2296	O	VAL A 437	70.741	53.013	2.238	1.00	40.43	O
ATOM	2297	CB	VAL A 437	69.992	53.765	5.245	1.00	41.57	C
ATOM	2298	CG1	VAL A 437	69.165	54.547	6.252	1.00	41.59	C
ATOM	2299	CG2	VAL A 437	69.341	52.433	4.936	1.00	41.15	C
ATOM	2300	N	PRO A 438	72.431	54.210	3.107	1.00	40.34	N
ATOM	2301	CA	PRO A 438	73.428	53.559	2.252	1.00	39.68	C
ATOM	2302	C	PRO A 438	73.553	52.068	2.546	1.00	39.03	C
ATOM	2303	O	PRO A 438	73.591	51.656	3.708	1.00	38.81	O
ATOM	2304	CB	PRO A 438	74.706	54.329	2.570	1.00	39.92	C
ATOM	2305	CG	PRO A 438	74.512	54.693	4.014	1.00	40.33	C
ATOM	2306	CD	PRO A 438	73.072	55.149	4.043	1.00	40.10	C
ATOM	2307	N	TYR A 439	73.606	51.267	1.486	1.00	38.09	N
ATOM	2308	CA	TYR A 439	73.736	49.821	1.614	1.00	37.58	C
ATOM	2309	C	TYR A 439	75.059	49.499	2.299	1.00	37.43	C
ATOM	2310	O	TYR A 439	76.098	50.048	1.948	1.00	37.52	O
ATOM	2311	CB	TYR A 439	73.688	49.170	0.229	1.00	36.98	C
ATOM	2312	CG	TYR A 439	73.817	47.666	0.237	1.00	36.27	C
ATOM	2313	CD1	TYR A 439	72.869	46.871	0.870	1.00	36.31	C
ATOM	2314	CD2	TYR A 439	74.879	47.034	-0.414	1.00	36.64	C
ATOM	2315	CE1	TYR A 439	72.970	45.479	0.856	1.00	36.58	C
ATOM	2316	CE2	TYR A 439	74.989	45.646	-0.434	1.00	36.33	C
ATOM	2317	CZ	TYR A 439	74.030	44.877	0.202	1.00	36.46	C
ATOM	2318	OH	TYR A 439	74.134	43.506	0.187	1.00	37.16	O

ATOM	2319	N	ALA A 440	75.024	48.598	3.272	1.00	37.46	N
ATOM	2320	CA	ALA A 440	76.236	48.251	4.002	1.00	37.42	C
ATOM	2321	C	ALA A 440	76.672	46.809	3.794	1.00	37.20	C
ATOM	2322	O	ALA A 440	77.760	46.424	4.213	1.00	37.15	O
ATOM	2323	CB	ALA A 440	76.033	48.523	5.494	1.00	37.18	C
ATOM	2324	N	GLY A 441	75.828	46.016	3.145	1.00	37.04	N
ATOM	2325	CA	GLY A 441	76.169	44.624	2.926	1.00	37.04	C
ATOM	2326	C	GLY A 441	75.475	43.746	3.950	1.00	37.28	C
ATOM	2327	O	GLY A 441	74.415	44.107	4.456	1.00	37.10	O
ATOM	2328	N	LYS A 442	76.067	42.598	4.265	1.00	37.56	N
ATOM	2329	CA	LYS A 442	75.469	41.687	5.232	1.00	37.84	C
ATOM	2330	C	LYS A 442	75.707	42.113	6.677	1.00	37.14	C
ATOM	2331	O	LYS A 442	76.746	42.683	7.013	1.00	36.64	O
ATOM	2332	CB	LYS A 442	75.995	40.266	5.017	1.00	39.16	C
ATOM	2333	CG	LYS A 442	75.839	39.789	3.584	1.00	41.53	C
ATOM	2334	CD	LYS A 442	75.692	38.280	3.495	1.00	43.26	C
ATOM	2335	CE	LYS A 442	74.316	37.842	3.976	1.00	44.48	C
ATOM	2336	NZ	LYS A 442	74.126	36.365	3.858	1.00	45.91	N
ATOM	2337	N	LEU A 443	74.724	41.823	7.524	1.00	36.39	N
ATOM	2338	CA	LEU A 443	74.774	42.161	8.940	1.00	35.72	C
ATOM	2339	C	LEU A 443	76.055	41.701	9.645	1.00	35.73	C
ATOM	2340	O	LEU A 443	76.723	42.493	10.314	1.00	35.02	O
ATOM	2341	CB	LEU A 443	73.545	41.571	9.640	1.00	34.56	C
ATOM	2342	CG	LEU A 443	73.386	41.723	11.157	1.00	34.09	C
ATOM	2343	CD1	LEU A 443	71.921	41.572	11.526	1.00	33.35	C
ATOM	2344	CD2	LEU A 443	74.234	40.685	11.883	1.00	33.47	C
ATOM	2345	N	LYS A 444	76.396	40.428	9.479	1.00	35.89	N
ATOM	2346	CA	LYS A 444	77.572	39.840	10.116	1.00	36.54	C
ATOM	2347	C	LYS A 444	78.837	40.702	10.158	1.00	36.30	C
ATOM	2348	O	LYS A 444	79.285	41.100	11.232	1.00	36.27	O
ATOM	2349	CB	LYS A 444	77.910	38.500	9.455	1.00	37.62	C
ATOM	2350	CG	LYS A 444	78.998	37.715	10.180	1.00	39.34	C
ATOM	2351	CD	LYS A 444	79.322	36.415	9.452	1.00	40.97	C
ATOM	2352	CE	LYS A 444	80.227	35.523	10.285	1.00	41.64	C
ATOM	2353	NZ	LYS A 444	81.483	36.221	10.689	1.00	42.46	N
ATOM	2354	N	ASP A 445	79.406	40.985	8.991	1.00	35.80	N
ATOM	2355	CA	ASP A 445	80.638	41.762	8.892	1.00	35.72	C
ATOM	2356	C	ASP A 445	80.567	43.135	9.546	1.00	34.60	C
ATOM	2357	O	ASP A 445	81.541	43.593	10.148	1.00	34.07	O
ATOM	2358	CB	ASP A 445	81.033	41.918	7.421	1.00	37.61	C
ATOM	2359	CG	ASP A 445	81.167	40.580	6.711	1.00	39.41	C
ATOM	2360	OD1	ASP A 445	82.084	39.804	7.066	1.00	39.74	O
ATOM	2361	OD2	ASP A 445	80.343	40.301	5.810	1.00	40.68	O
ATOM	2362	N	ASN A 446	79.420	43.792	9.415	1.00	33.16	N
ATOM	2363	CA	ASN A 446	79.231	45.117	9.991	1.00	32.29	C
ATOM	2364	C	ASN A 446	79.121	45.054	11.508	1.00	31.85	C
ATOM	2365	O	ASN A 446	79.757	45.833	12.217	1.00	31.32	O
ATOM	2366	CB	ASN A 446	77.983	45.759	9.398	1.00	32.15	C
ATOM	2367	CG	ASN A 446	78.181	46.173	7.956	1.00	32.29	C
ATOM	2368	OD1	ASN A 446	78.690	47.264	7.678	1.00	32.36	O
ATOM	2369	ND2	ASN A 446	77.797	45.300	7.029	1.00	30.94	N
ATOM	2370	N	VAL A 447	78.318	44.120	12.004	1.00	31.23	N
ATOM	2371	CA	VAL A 447	78.151	43.965	13.436	1.00	31.20	C
ATOM	2372	C	VAL A 447	79.477	43.588	14.104	1.00	31.65	C
ATOM	2373	O	VAL A 447	79.819	44.124	15.156	1.00	31.22	O
ATOM	2374	CB	VAL A 447	77.088	42.889	13.763	1.00	30.72	C
ATOM	2375	CG1	VAL A 447	77.151	42.519	15.235	1.00	30.21	C

TABLE 5

ATOM	2376	CG2	VAL	A	447	75.705	43.416	13.424	1.00	30.13	C
ATOM	2377	N	GLU	A	448	80.228	42.679	13.490	1.00	31.79	N
ATOM	2378	CA	GLU	A	448	81.493	42.260	14.071	1.00	32.87	C
ATOM	2379	C	GLU	A	448	82.509	43.398	14.062	1.00	32.19	C
ATOM	2380	O	GLU	A	448	83.329	43.506	14.970	1.00	31.93	O
ATOM	2381	CB	GLU	A	448	82.037	41.021	13.339	1.00	34.51	C
ATOM	2382	CG	GLU	A	448	81.008	39.886	13.264	1.00	37.38	C
ATOM	2383	CD	GLU	A	448	81.609	38.522	12.933	1.00	39.91	C
ATOM	2384	OE1	GLU	A	448	82.543	38.447	12.098	1.00	41.39	O
ATOM	2385	OE2	GLU	A	448	81.129	37.514	13.501	1.00	40.50	O
ATOM	2386	N	ALA	A	449	82.448	44.254	13.049	1.00	31.62	N
ATOM	2387	CA	ALA	A	449	83.366	45.385	12.978	1.00	30.96	C
ATOM	2388	C	ALA	A	449	82.995	46.398	14.063	1.00	30.59	C
ATOM	2389	O	ALA	A	449	83.866	46.907	14.775	1.00	29.96	O
ATOM	2390	CB	ALA	A	449	83.304	46.040	11.600	1.00	31.10	C
ATOM	2391	N	SER	A	450	81.701	46.686	14.187	1.00	30.07	N
ATOM	2392	CA	SER	A	450	81.222	47.625	15.197	1.00	29.77	C
ATOM	2393	C	SER	A	450	81.589	47.160	16.606	1.00	29.70	C
ATOM	2394	O	SER	A	450	82.085	47.943	17.419	1.00	29.34	O
ATOM	2395	CB	SER	A	450	79.699	47.779	15.117	1.00	29.51	C
ATOM	2396	OG	SER	A	450	79.306	48.434	13.931	1.00	29.55	O
ATOM	2397	N	LEU	A	451	81.341	45.884	16.886	1.00	29.59	N
ATOM	2398	CA	LEU	A	451	81.624	45.321	18.202	1.00	29.99	C
ATOM	2399	C	LEU	A	451	83.111	45.175	18.505	1.00	30.55	C
ATOM	2400	O	LEU	A	451	83.509	45.213	19.670	1.00	30.21	O
ATOM	2401	CB	LEU	A	451	80.902	43.981	18.372	1.00	28.74	C
ATOM	2402	CG	LEU	A	451	79.374	44.128	18.335	1.00	28.52	C
ATOM	2403	CD1	LEU	A	451	78.726	42.808	18.674	1.00	27.60	C
ATOM	2404	CD2	LEU	A	451	78.924	45.215	19.319	1.00	27.59	C
ATOM	2405	N	ASN	A	452	83.933	45.012	17.471	1.00	31.38	N
ATOM	2406	CA	ASN	A	452	85.372	44.923	17.694	1.00	32.50	C
ATOM	2407	C	ASN	A	452	85.838	46.287	18.185	1.00	32.25	C
ATOM	2408	O	ASN	A	452	86.751	46.390	19.005	1.00	32.13	O
ATOM	2409	CB	ASN	A	452	86.130	44.568	16.411	1.00	33.77	C
ATOM	2410	CG	ASN	A	452	86.149	43.079	16.140	1.00	36.12	C
ATOM	2411	OD1	ASN	A	452	86.254	42.263	17.066	1.00	37.33	O
ATOM	2412	ND2	ASN	A	452	86.069	42.712	14.866	1.00	37.13	N
ATOM	2413	N	LYS	A	453	85.203	47.335	17.674	1.00	31.85	N
ATOM	2414	CA	LYS	A	453	85.547	48.693	18.067	1.00	32.30	C
ATOM	2415	C	LYS	A	453	85.137	48.922	19.519	1.00	31.23	C
ATOM	2416	O	LYS	A	453	85.888	49.497	20.303	1.00	30.82	O
ATOM	2417	CB	LYS	A	453	84.838	49.694	17.157	1.00	33.75	C
ATOM	2418	CG	LYS	A	453	85.166	51.143	17.450	1.00	36.50	C
ATOM	2419	CD	LYS	A	453	84.539	52.063	16.406	1.00	39.06	C
ATOM	2420	CE	LYS	A	453	85.055	51.754	14.999	1.00	39.28	C
ATOM	2421	NZ	LYS	A	453	84.355	52.589	13.978	1.00	40.79	N
ATOM	2422	N	VAL	A	454	83.937	48.462	19.864	1.00	30.16	N
ATOM	2423	CA	VAL	A	454	83.418	48.591	21.215	1.00	29.31	C
ATOM	2424	C	VAL	A	454	84.334	47.848	22.189	1.00	29.13	C
ATOM	2425	O	VAL	A	454	84.696	48.372	23.243	1.00	28.31	O
ATOM	2426	CB	VAL	A	454	81.984	48.012	21.314	1.00	29.18	C
ATOM	2427	CG1	VAL	A	454	81.506	48.019	22.765	1.00	28.54	C
ATOM	2428	CG2	VAL	A	454	81.038	48.830	20.444	1.00	28.30	C
ATOM	2429	N	LYS	A	455	84.705	46.623	21.824	1.00	28.92	N
ATOM	2430	CA	LYS	A	455	85.581	45.804	22.656	1.00	28.73	C
ATOM	2431	C	LYS	A	455	86.919	46.498	22.855	1.00	28.34	C
ATOM	2432	O	LYS	A	455	87.462	46.522	23.954	1.00	28.12	O



TABLE 5

ATOM	2433	CB	LYS	A	455	85.822	44.440	22.006	1.00	28.84	C
ATOM	2434	CG	LYS	A	455	84.620	43.517	21.976	1.00	29.31	C
ATOM	2435	CD	LYS	A	455	84.971	42.252	21.200	1.00	29.86	C
ATOM	2436	CE	LYS	A	455	83.802	41.296	21.114	1.00	31.18	C
ATOM	2437	NZ	LYS	A	455	84.174	40.040	20.399	1.00	31.56	N
ATOM	2438	N	SER	A	456	87.448	47.057	21.774	1.00	28.04	N
ATOM	2439	CA	SER	A	456	88.720	47.754	21.834	1.00	28.45	C
ATOM	2440	C	SER	A	456	88.631	48.936	22.802	1.00	27.62	C
ATOM	2441	O	SER	A	456	89.497	49.121	23.658	1.00	27.05	O
ATOM	2442	CB	SER	A	456	89.114	48.237	20.434	1.00	28.94	C
ATOM	2443	OG	SER	A	456	90.336	48.950	20.475	1.00	31.01	O
ATOM	2444	N	THR	A	457	87.578	49.733	22.662	1.00	26.61	N
ATOM	2445	CA	THR	A	457	87.377	50.885	23.528	1.00	26.30	C
ATOM	2446	C	THR	A	457	87.186	50.444	24.978	1.00	25.88	C
ATOM	2447	O	THR	A	457	87.697	51.080	25.896	1.00	25.21	O
ATOM	2448	CB	THR	A	457	86.157	51.706	23.070	1.00	26.38	C
ATOM	2449	OG1	THR	A	457	86.378	52.139	21.727	1.00	27.27	O
ATOM	2450	CG2	THR	A	457	85.949	52.926	23.961	1.00	25.15	C
ATOM	2451	N	MET	A	458	86.456	49.353	25.184	1.00	25.53	N
ATOM	2452	CA	MET	A	458	86.244	48.857	26.535	1.00	26.03	C
ATOM	2453	C	MET	A	458	87.578	48.547	27.201	1.00	26.68	C
ATOM	2454	O	MET	A	458	87.768	48.826	28.383	1.00	26.93	O
ATOM	2455	CB	MET	A	458	85.340	47.623	26.521	1.00	25.33	C
ATOM	2456	CG	MET	A	458	83.876	47.976	26.285	1.00	24.43	C
ATOM	2457	SD	MET	A	458	82.816	46.551	26.067	1.00	25.53	S
ATOM	2458	CE	MET	A	458	82.942	45.769	27.715	1.00	24.14	C
ATOM	2459	N	CYS	A	459	88.507	47.977	26.445	1.00	27.44	N
ATOM	2460	CA	CYS	A	459	89.819	47.682	27.000	1.00	28.79	C
ATOM	2461	C	CYS	A	459	90.578	48.968	27.351	1.00	28.24	C
ATOM	2462	O	CYS	A	459	91.338	48.996	28.322	1.00	27.71	O
ATOM	2463	CB	CYS	A	459	90.628	46.819	26.030	1.00	31.37	C
ATOM	2464	SG	CYS	A	459	90.257	45.047	26.230	1.00	35.38	S
ATOM	2465	N	ASN	A	460	90.375	50.030	26.569	1.00	27.55	N
ATOM	2466	CA	ASN	A	460	91.028	51.309	26.855	1.00	27.53	C
ATOM	2467	C	ASN	A	460	90.504	51.804	28.202	1.00	27.21	C
ATOM	2468	O	ASN	A	460	91.202	52.496	28.938	1.00	26.69	O
ATOM	2469	CB	ASN	A	460	90.696	52.362	25.787	1.00	27.94	C
ATOM	2470	CG	ASN	A	460	91.419	52.122	24.471	1.00	29.27	C
ATOM	2471	OD1	ASN	A	460	90.796	52.061	23.409	1.00	29.42	O
ATOM	2472	ND2	ASN	A	460	92.741	51.998	24.533	1.00	29.31	N
ATOM	2473	N	CYS	A	461	89.261	51.441	28.512	1.00	26.99	N
ATOM	2474	CA	CYS	A	461	88.632	51.855	29.755	1.00	26.90	C
ATOM	2475	C	CYS	A	461	88.865	50.838	30.871	1.00	26.66	C
ATOM	2476	O	CYS	A	461	88.367	51.003	31.976	1.00	26.77	O
ATOM	2477	CB	CYS	A	461	87.126	52.063	29.538	1.00	27.30	C
ATOM	2478	SG	CYS	A	461	86.714	53.341	28.304	1.00	27.83	S
ATOM	2479	N	GLY	A	462	89.627	49.793	30.570	1.00	26.92	N
ATOM	2480	CA	GLY	A	462	89.919	48.768	31.557	1.00	26.65	C
ATOM	2481	C	GLY	A	462	88.758	47.842	31.881	1.00	26.78	C
ATOM	2482	O	GLY	A	462	88.659	47.347	33.001	1.00	26.85	O
ATOM	2483	N	ALA	A	463	87.882	47.592	30.913	1.00	26.47	N
ATOM	2484	CA	ALA	A	463	86.731	46.725	31.155	1.00	26.74	C
ATOM	2485	C	ALA	A	463	86.700	45.507	30.249	1.00	26.80	C
ATOM	2486	O	ALA	A	463	86.898	45.616	29.034	1.00	26.39	O
ATOM	2487	CB	ALA	A	463	85.433	47.515	30.991	1.00	26.14	C
ATOM	2488	N	LEU	A	464	86.444	44.349	30.850	1.00	27.16	N
ATOM	2489	CA	LEU	A	464	86.356	43.101	30.105	1.00	27.87	C

TABLE 5

ATOM	2490	C	LEU A 464	84.901	42.683	29.943	1.00	27.47	C
ATOM	2491	O	LEU A 464	84.604	41.722	29.239	1.00	28.26	O
ATOM	2492	CB	LEU A 464	87.138	41.984	30.806	1.00	28.54	C
ATOM	2493	CG	LEU A 464	88.634	41.869	30.492	1.00	29.79	C
ATOM	2494	CD1	LEU A 464	88.827	41.779	28.983	1.00	29.98	C
ATOM	2495	CD2	LEU A 464	89.388	43.078	31.039	1.00	31.57	C
ATOM	2496	N	THR A 465	83.997	43.398	30.606	1.00	26.65	N
ATOM	2497	CA	THR A 465	82.573	43.096	30.515	1.00	25.99	C
ATOM	2498	C	THR A 465	81.786	44.391	30.567	1.00	25.84	C
ATOM	2499	O	THR A 465	82.318	45.435	30.945	1.00	25.20	O
ATOM	2500	CB	THR A 465	82.077	42.229	31.688	1.00	25.98	C
ATOM	2501	OG1	THR A 465	82.139	42.991	32.899	1.00	25.86	O
ATOM	2502	CG2	THR A 465	82.921	40.975	31.827	1.00	26.08	C
ATOM	2503	N	ILE A 466	80.514	44.316	30.197	1.00	25.29	N
ATOM	2504	CA	ILE A 466	79.666	45.495	30.219	1.00	25.21	C
ATOM	2505	C	ILE A 466	79.470	45.999	31.650	1.00	25.01	C
ATOM	2506	O	ILE A 466	79.569	47.197	31.902	1.00	25.19	O
ATOM	2507	CB	ILE A 466	78.316	45.208	29.531	1.00	25.13	C
ATOM	2508	CG1	ILE A 466	78.565	45.033	28.025	1.00	25.57	C
ATOM	2509	CG2	ILE A 466	77.323	46.336	29.809	1.00	24.41	C
ATOM	2510	CD1	ILE A 466	77.351	44.586	27.223	1.00	26.34	C
ATOM	2511	N	PRO A 467	79.197	45.095	32.610	1.00	25.04	N
ATOM	2512	CA	PRO A 467	79.023	45.598	33.975	1.00	24.53	C
ATOM	2513	C	PRO A 467	80.303	46.274	34.464	1.00	24.42	C
ATOM	2514	O	PRO A 467	80.256	47.287	35.155	1.00	24.23	O
ATOM	2515	CB	PRO A 467	78.686	44.333	34.767	1.00	24.74	C
ATOM	2516	CG	PRO A 467	77.936	43.508	33.754	1.00	24.43	C
ATOM	2517	CD	PRO A 467	78.817	43.672	32.527	1.00	24.58	C
ATOM	2518	N	GLN A 468	81.455	45.723	34.105	1.00	24.65	N
ATOM	2519	CA	GLN A 468	82.702	46.335	34.536	1.00	25.05	C
ATOM	2520	C	GLN A 468	82.883	47.705	33.873	1.00	25.35	C
ATOM	2521	O	GLN A 468	83.447	48.621	34.471	1.00	25.30	O
ATOM	2522	CB	GLN A 468	83.890	45.430	34.219	1.00	24.93	C
ATOM	2523	CG	GLN A 468	85.207	46.019	34.668	1.00	25.22	C
ATOM	2524	CD	GLN A 468	86.347	45.017	34.648	1.00	25.10	C
ATOM	2525	OE1	GLN A 468	86.493	44.234	33.707	1.00	24.05	O
ATOM	2526	NE2	GLN A 468	87.176	45.054	35.686	1.00	25.09	N
ATOM	2527	N	LEU A 469	82.400	47.840	32.639	1.00	25.06	N
ATOM	2528	CA	LEU A 469	82.488	49.108	31.919	1.00	24.83	C
ATOM	2529	C	LEU A 469	81.609	50.150	32.617	1.00	25.01	C
ATOM	2530	O	LEU A 469	82.023	51.292	32.838	1.00	24.50	O
ATOM	2531	CB	LEU A 469	82.010	48.932	30.476	1.00	24.41	C
ATOM	2532	CG	LEU A 469	81.852	50.214	29.655	1.00	24.56	C
ATOM	2533	CD1	LEU A 469	83.223	50.807	29.360	1.00	24.30	C
ATOM	2534	CD2	LEU A 469	81.112	49.906	28.358	1.00	24.10	C
ATOM	2535	N	GLN A 470	80.395	49.741	32.966	1.00	25.06	N
ATOM	2536	CA	GLN A 470	79.441	50.622	33.629	1.00	25.82	C
ATOM	2537	C	GLN A 470	79.966	51.100	34.981	1.00	26.53	C
ATOM	2538	O	GLN A 470	79.627	52.184	35.467	1.00	26.74	O
ATOM	2539	CB	GLN A 470	78.102	49.886	33.775	1.00	25.24	C
ATOM	2540	CG	GLN A 470	77.455	49.646	32.406	1.00	25.04	C
ATOM	2541	CD	GLN A 470	76.245	48.731	32.421	1.00	25.22	C
ATOM	2542	OE1	GLN A 470	75.453	48.722	31.469	1.00	25.47	O
ATOM	2543	NE2	GLN A 470	76.099	47.948	33.479	1.00	24.84	N
ATOM	2544	N	SER A 471	80.829	50.291	35.572	1.00	27.02	N
ATOM	2545	CA	SER A 471	81.404	50.617	36.860	1.00	27.70	C
ATOM	2546	C	SER A 471	82.654	51.505	36.756	1.00	27.93	C

ATOM	2547	O	SER A 471	82.805	52.458	37.517	1.00	28.18	O
ATOM	2548	CB	SER A 471	81.741	49.316	37.596	1.00	27.39	C
ATOM	2549	OG	SER A 471	82.515	49.569	38.748	1.00	29.07	O
ATOM	2550	N	LYS A 472	83.522	51.208	35.794	1.00	28.02	N
ATOM	2551	CA	LYS A 472	84.785	51.935	35.630	1.00	28.71	C
ATOM	2552	C	LYS A 472	84.851	53.106	34.647	1.00	28.19	C
ATOM	2553	O	LYS A 472	85.796	53.891	34.696	1.00	28.07	O
ATOM	2554	CB	LYS A 472	85.883	50.938	35.257	1.00	29.32	C
ATOM	2555	CG	LYS A 472	86.050	49.816	36.267	1.00	31.72	C
ATOM	2556	CD	LYS A 472	87.050	48.764	35.805	1.00	32.09	C
ATOM	2557	CE	LYS A 472	88.459	49.308	35.753	1.00	32.85	C
ATOM	2558	NZ	LYS A 472	89.418	48.212	35.419	1.00	33.48	N
ATOM	2559	N	ALA A 473	83.868	53.223	33.760	1.00	27.53	N
ATOM	2560	CA	ALA A 473	83.875	54.283	32.758	1.00	27.01	C
ATOM	2561	C	ALA A 473	83.977	55.698	33.313	1.00	26.91	C
ATOM	2562	O	ALA A 473	83.341	56.049	34.309	1.00	26.92	O
ATOM	2563	CB	ALA A 473	82.635	54.169	31.859	1.00	27.23	C
ATOM	2564	N	LYS A 474	84.803	56.499	32.649	1.00	26.59	N
ATOM	2565	CA	LYS A 474	85.012	57.898	32.999	1.00	26.15	C
ATOM	2566	C	LYS A 474	84.444	58.636	31.791	1.00	26.08	C
ATOM	2567	O	LYS A 474	84.973	58.545	30.684	1.00	25.63	O
ATOM	2568	CB	LYS A 474	86.504	58.161	33.190	1.00	25.22	C
ATOM	2569	CG	LYS A 474	87.062	57.433	34.414	1.00	25.03	C
ATOM	2570	CD	LYS A 474	88.530	57.064	34.245	1.00	24.53	C
ATOM	2571	CE	LYS A 474	89.433	58.274	34.298	1.00	24.54	C
ATOM	2572	NZ	LYS A 474	90.837	57.870	33.996	1.00	23.96	N
ATOM	2573	N	ILE A 475	83.348	59.350	32.011	1.00	26.24	N
ATOM	2574	CA	ILE A 475	82.652	60.025	30.926	1.00	26.16	C
ATOM	2575	C	ILE A 475	82.601	61.527	31.073	1.00	26.07	C
ATOM	2576	O	ILE A 475	82.064	62.045	32.049	1.00	26.61	O
ATOM	2577	CB	ILE A 475	81.206	59.489	30.821	1.00	26.31	C
ATOM	2578	CG1	ILE A 475	81.230	57.954	30.784	1.00	26.16	C
ATOM	2579	CG2	ILE A 475	80.526	60.042	29.572	1.00	26.65	C
ATOM	2580	CD1	ILE A 475	79.853	57.299	30.764	1.00	24.83	C
ATOM	2581	N	THR A 476	83.156	62.228	30.093	1.00	25.67	N
ATOM	2582	CA	THR A 476	83.158	63.677	30.136	1.00	25.52	C
ATOM	2583	C	THR A 476	82.290	64.288	29.056	1.00	25.76	C
ATOM	2584	O	THR A 476	82.160	63.752	27.951	1.00	25.51	O
ATOM	2585	CB	THR A 476	84.581	64.261	29.977	1.00	25.15	C
ATOM	2586	OG1	THR A 476	84.519	65.689	30.093	1.00	24.81	O
ATOM	2587	CG2	THR A 476	85.168	63.897	28.616	1.00	24.56	C
ATOM	2588	N	LEU A 477	81.686	65.414	29.401	1.00	26.07	N
ATOM	2589	CA	LEU A 477	80.869	66.159	28.467	1.00	27.01	C
ATOM	2590	C	LEU A 477	81.908	66.963	27.677	1.00	27.30	C
ATOM	2591	O	LEU A 477	82.996	67.239	28.183	1.00	26.31	O
ATOM	2592	CB	LEU A 477	79.929	67.103	29.225	1.00	27.31	C
ATOM	2593	CG	LEU A 477	78.834	67.808	28.421	1.00	28.63	C
ATOM	2594	CD1	LEU A 477	77.822	66.782	27.915	1.00	28.11	C
ATOM	2595	CD2	LEU A 477	78.148	68.842	29.303	1.00	28.70	C
ATOM	2596	N	VAL A 478	81.577	67.317	26.443	1.00	27.88	N
ATOM	2597	CA	VAL A 478	82.472	68.085	25.590	1.00	29.05	C
ATOM	2598	C	VAL A 478	81.802	69.428	25.295	1.00	29.61	C
ATOM	2599	O	VAL A 478	80.581	69.504	25.177	1.00	29.56	O
ATOM	2600	CB	VAL A 478	82.737	67.322	24.269	1.00	29.48	C
ATOM	2601	CG1	VAL A 478	83.643	68.125	23.368	1.00	30.38	C
ATOM	2602	CG2	VAL A 478	83.370	65.970	24.579	1.00	29.54	C
ATOM	2603	N	SER A 479	82.596	70.484	25.183	1.00	30.34	N

TABLE 5

ATOM	2604	CA	SER A 479	82.058	71.819	24.916	1.00	31.62	C
ATOM	2605	C	SER A 479	81.402	71.940	23.545	1.00	32.67	C
ATOM	2606	O	SER A 479	81.770	71.232	22.609	1.00	31.95	O
ATOM	2607	CB	SER A 479	83.168	72.866	25.021	1.00	30.68	C
ATOM	2608	OG	SER A 479	84.085	72.730	23.949	1.00	30.46	O
ATOM	2609	N	SER A 480	80.442	72.858	23.437	1.00	34.86	N
ATOM	2610	CA	SER A 480	79.729	73.110	22.183	1.00	37.33	C
ATOM	2611	C	SER A 480	80.703	73.371	21.041	1.00	38.47	C
ATOM	2612	O	SER A 480	80.561	72.816	19.951	1.00	38.60	O
ATOM	2613	CB	SER A 480	78.813	74.331	22.317	1.00	37.61	C
ATOM	2614	OG	SER A 480	77.888	74.175	23.373	1.00	39.26	O
ATOM	2615	N	VAL A 481	81.685	74.229	21.302	1.00	40.19	N
ATOM	2616	CA	VAL A 481	82.694	74.592	20.311	1.00	42.19	C
ATOM	2617	C	VAL A 481	83.561	73.422	19.843	1.00	43.43	C
ATOM	2618	O	VAL A 481	83.944	73.364	18.676	1.00	43.73	O
ATOM	2619	CB	VAL A 481	83.617	75.716	20.848	1.00	42.42	C
ATOM	2620	CG1	VAL A 481	84.833	75.879	19.941	1.00	42.66	C
ATOM	2621	CG2	VAL A 481	82.844	77.029	20.917	1.00	42.27	C
ATOM	2622	N	SER A 482	83.879	72.499	20.744	1.00	44.59	N
ATOM	2623	CA	SER A 482	84.697	71.346	20.378	1.00	46.25	C
ATOM	2624	C	SER A 482	84.013	70.517	19.293	1.00	47.04	C
ATOM	2625	O	SER A 482	84.670	69.773	18.556	1.00	47.14	O
ATOM	2626	CB	SER A 482	84.943	70.448	21.594	1.00	46.49	C
ATOM	2627	OG	SER A 482	85.710	71.107	22.583	1.00	48.50	O
ATOM	2628	N	ILE A 483	82.693	70.638	19.204	1.00	47.71	N
ATOM	2629	CA	ILE A 483	81.934	69.876	18.219	1.00	48.77	C
ATOM	2630	C	ILE A 483	81.656	70.687	16.952	1.00	49.17	C
ATOM	2631	O	ILE A 483	81.552	71.931	17.042	1.00	49.53	O
ATOM	2632	CB	ILE A 483	80.597	69.387	18.833	1.00	48.86	C
ATOM	2633	CG1	ILE A 483	80.886	68.549	20.081	1.00	48.85	C
ATOM	2634	CG2	ILE A 483	79.818	68.552	17.822	1.00	49.17	C
ATOM	2635	CD1	ILE A 483	79.650	68.141	20.845	1.00	49.07	C
TER	2636		ILE A 483						
HETATM	2637	K	K A 900	52.558	59.979	29.204	0.75	33.19	K
HETATM	2638	P	XMP 602	67.402	54.842	14.904	1.00	30.34	P
HETATM	2639	O1P	XMP 602	67.002	54.789	13.486	1.00	30.72	O
HETATM	2640	O2P	XMP 602	68.190	53.690	15.379	1.00	30.78	O
HETATM	2641	O5'	XMP 602	66.075	54.823	15.699	1.00	29.65	O
HETATM	2642	O3P	XMP 602	67.954	56.140	15.323	1.00	30.68	O
HETATM	2643	C5'	XMP 602	65.078	53.767	15.814	1.00	29.12	C
HETATM	2644	C4'	XMP 602	63.985	54.002	16.886	1.00	29.15	C
HETATM	2645	O4'	XMP 602	63.144	55.124	16.601	1.00	29.44	O
HETATM	2646	C1'	XMP 602	61.803	55.041	17.060	1.00	29.86	C
HETATM	2647	N9	XMP 602	60.863	55.346	15.925	1.00	30.85	N
HETATM	2648	C4	XMP 602	60.396	56.585	15.533	1.00	31.77	C
HETATM	2649	N3	XMP 602	60.681	57.809	16.083	1.00	32.09	N
HETATM	2650	N1	XMP 602	59.202	58.646	14.358	1.00	32.72	N
HETATM	2651	C2	XMP 602	60.053	58.836	15.454	1.00	33.14	C
HETATM	2652	O2	XMP 602	60.229	59.983	15.858	1.00	33.63	O
HETATM	2653	C6	XMP 602	58.897	57.407	13.781	1.00	32.30	C
HETATM	2654	O6	XMP 602	58.148	57.308	12.825	1.00	33.30	O
HETATM	2655	C5	XMP 602	59.556	56.336	14.439	1.00	32.02	C
HETATM	2656	N7	XMP 602	59.498	55.005	14.154	1.00	31.42	N
HETATM	2657	C8	XMP 602	60.263	54.494	15.036	1.00	31.18	C
HETATM	2658	C2'	XMP 602	61.788	53.653	17.733	1.00	29.10	C
HETATM	2659	O2'	XMP 602	61.947	53.880	19.132	1.00	29.07	O
HETATM	2660	C3'	XMP 602	62.943	52.927	17.024	1.00	28.77	C

HETATM	2661	O3'	XMP	602	63.388	51.798	17.768	1.00	28.12	O
HETATM	2662	AP	NAD	987	50.634	53.888	20.452	1.00	70.18	P
HETATM	2663	AO1	NAD	987	49.686	52.811	20.084	1.00	70.10	O
HETATM	2664	AO2	NAD	987	51.622	53.619	21.519	1.00	70.18	O
HETATM	2665	AO5*	NAD	987	49.807	55.222	20.825	1.00	70.73	O
HETATM	2666	AC5*	NAD	987	48.836	55.190	21.879	1.00	71.96	C
HETATM	2667	AC4*	NAD	987	48.158	56.575	22.018	1.00	72.40	C
HETATM	2668	AO4*	NAD	987	47.053	56.406	22.993	1.00	72.62	O
HETATM	2669	AC3*	NAD	987	47.458	56.986	20.719	1.00	72.81	C
HETATM	2670	AO3*	NAD	987	48.185	56.491	19.587	1.00	73.24	O
HETATM	2671	AC2*	NAD	987	46.117	56.309	20.794	1.00	72.87	C
HETATM	2672	AO2*	NAD	987	46.258	54.925	20.444	1.00	72.72	O
HETATM	2673	AC1*	NAD	987	45.766	56.439	22.272	1.00	72.67	C
HETATM	2674	AN9	NAD	987	44.784	55.412	22.731	1.00	72.51	N
HETATM	2675	AC8	NAD	987	43.460	55.583	22.865	1.00	72.46	C
HETATM	2676	AN7	NAD	987	42.908	54.431	23.274	1.00	72.16	N
HETATM	2677	AC5	NAD	987	43.880	53.538	23.399	1.00	72.08	C
HETATM	2678	AC6	NAD	987	43.920	52.200	23.781	1.00	72.01	C
HETATM	2679	AN6	NAD	987	42.803	51.558	24.105	1.00	72.25	N
HETATM	2680	AN1	NAD	987	45.108	51.553	23.810	1.00	71.86	N
HETATM	2681	AC2	NAD	987	46.241	52.179	23.476	1.00	71.78	C
HETATM	2682	AN3	NAD	987	46.228	53.462	23.105	1.00	71.90	N
HETATM	2683	AC4	NAD	987	45.069	54.157	23.059	1.00	72.20	C
HETATM	2684	O3	NAD	987	51.412	54.316	19.101	1.00	69.74	O
HETATM	2685	NP	NAD	987	52.634	55.383	19.126	1.00	69.12	P
HETATM	2686	NO1	NAD	987	53.103	55.572	20.519	1.00	68.69	O
HETATM	2687	NO2	NAD	987	52.250	56.578	18.341	1.00	69.23	O
HETATM	2688	NO5*	NAD	987	53.807	54.613	18.343	1.00	69.13	O
HETATM	2689	NC5*	NAD	987	53.538	53.954	17.101	1.00	68.98	C
HETATM	2690	NC4*	NAD	987	54.844	53.577	16.381	1.00	68.78	C
HETATM	2691	NO4*	NAD	987	55.536	54.846	16.049	1.00	68.83	O
HETATM	2692	NC3*	NAD	987	55.787	52.849	17.333	1.00	68.59	C
HETATM	2693	NO3*	NAD	987	56.629	51.948	16.611	1.00	68.69	O
HETATM	2694	NC2*	NAD	987	56.615	53.936	17.951	1.00	68.50	C
HETATM	2695	NO2*	NAD	987	57.896	53.435	18.333	1.00	68.13	O
HETATM	2696	NC1*	NAD	987	56.784	54.933	16.818	1.00	68.70	C
HETATM	2697	NN1	NAD	987	57.133	56.318	17.254	1.00	69.08	N
HETATM	2698	NC2	NAD	987	58.217	56.537	18.152	1.00	69.28	C
HETATM	2699	NC3	NAD	987	58.549	57.847	18.538	1.00	69.57	C
HETATM	2700	NC7	NAD	987	59.715	58.103	19.514	1.00	69.91	C
HETATM	2701	NO7	NAD	987	60.134	59.245	19.712	1.00	70.20	O
HETATM	2702	NN7	NAD	987	60.220	57.016	20.103	1.00	69.78	N
HETATM	2703	NC4	NAD	987	57.806	58.929	18.030	1.00	69.34	C
HETATM	2704	NC5	NAD	987	56.734	58.723	17.144	1.00	69.28	C
HETATM	2705	NC6	NAD	987	56.393	57.421	16.753	1.00	69.10	C
HETATM	2706	O	HOH	1	80.159	44.885	4.169	1.00	45.58	O
HETATM	2707	O	HOH	2	70.459	54.183	21.914	1.00	24.31	O
HETATM	2708	O	HOH	3	57.313	58.461	28.306	1.00	24.50	O
HETATM	2709	O	HOH	4	65.571	60.118	24.639	1.00	23.07	O
HETATM	2710	O	HOH	5	40.291	38.852	28.760	1.00	49.15	O
HETATM	2711	O	HOH	6	66.287	47.668	38.747	1.00	21.93	O
HETATM	2712	O	HOH	7	86.808	55.200	31.125	1.00	27.24	O
HETATM	2713	O	HOH	8	79.324	41.691	29.401	1.00	21.83	O
HETATM	2714	O	HOH	9	69.419	61.415	38.396	1.00	44.68	O
HETATM	2715	O	HOH	10	58.291	50.786	22.925	1.00	24.55	O
HETATM	2716	O	HOH	11	70.499	53.076	14.172	1.00	25.36	O
HETATM	2717	O	HOH	12	75.758	43.567	30.918	1.00	21.79	O

HETATM 2718	O	HOH	13	88.069	53.459	33.173	1.00	26.13	O
HETATM 2719	O	HOH	14	67.647	38.078	46.052	1.00	35.25	O
HETATM 2720	O	HOH	15	72.291	37.808	33.719	1.00	27.23	O
HETATM 2721	O	HOH	16	56.445	78.452	34.278	1.00	24.45	O
HETATM 2722	O	HOH	17	58.982	44.997	36.851	1.00	25.40	O
HETATM 2723	O	HOH	18	51.923	53.605	25.905	1.00	30.95	O
HETATM 2724	O	HOH	19	58.261	35.282	26.925	1.00	32.59	O
HETATM 2725	O	HOH	20	78.214	47.801	37.366	1.00	36.04	O
HETATM 2726	O	HOH	21	77.272	53.707	34.316	1.00	27.76	O
HETATM 2727	O	HOH	22	47.841	54.106	36.571	1.00	37.78	O
HETATM 2728	O	HOH	23	64.271	41.030	7.745	1.00	31.98	O
HETATM 2729	O	HOH	24	73.286	57.144	36.094	1.00	24.02	O
HETATM 2730	O	HOH	25	67.036	59.452	38.278	1.00	48.34	O
HETATM 2731	O	HOH	26	56.058	41.046	37.332	1.00	41.47	O
HETATM 2732	O	HOH	27	59.588	50.684	20.017	1.00	32.62	O
HETATM 2733	O	HOH	28	68.814	67.431	32.848	1.00	28.56	O
HETATM 2734	O	HOH	29	81.923	66.876	31.746	1.00	32.25	O
HETATM 2735	O	HOH	30	61.989	38.331	33.948	1.00	24.11	O
HETATM 2736	O	HOH	31	69.891	33.131	27.256	1.00	33.89	O
HETATM 2737	O	HOH	32	60.032	39.147	6.730	1.00	39.28	O
HETATM 2738	O	HOH	33	61.745	63.891	35.416	1.00	31.28	O
HETATM 2739	O	HOH	34	48.981	43.802	20.915	1.00	29.86	O
HETATM 2740	O	HOH	35	69.168	35.704	7.655	1.00	35.67	O
HETATM 2741	O	HOH	36	76.202	65.130	31.664	1.00	44.93	O
HETATM 2742	O	HOH	37	69.263	32.519	38.368	1.00	38.37	O
HETATM 2743	O	HOH	38	65.179	36.434	34.852	1.00	29.61	O
HETATM 2744	O	HOH	39	59.293	59.263	30.587	1.00	36.96	O
HETATM 2745	O	HOH	40	49.423	42.410	7.845	1.00	53.80	O
HETATM 2746	O	HOH	41	64.358	73.055	32.790	1.00	26.48	O
HETATM 2747	O	HOH	42	71.857	63.707	34.068	1.00	60.77	O
HETATM 2748	O	HOH	43	56.071	57.344	38.813	1.00	42.44	O
HETATM 2749	O	HOH	44	63.542	56.163	20.268	1.00	36.97	O
HETATM 2750	O	HOH	45	61.356	50.051	17.813	1.00	26.22	O
HETATM 2751	O	HOH	46	92.220	40.526	20.299	1.00	49.10	O
HETATM 2752	O	HOH	47	71.972	61.198	21.121	1.00	35.90	O
HETATM 2753	O	HOH	48	83.870	52.797	20.905	1.00	29.24	O
HETATM 2754	O	HOH	49	56.116	76.920	37.019	1.00	36.67	O
HETATM 2755	O	HOH	50	50.418	45.939	35.861	1.00	36.94	O
HETATM 2756	O	HOH	51	81.571	63.014	21.227	1.00	32.08	O
HETATM 2757	O	HOH	52	66.576	33.997	36.818	1.00	42.85	O
HETATM 2758	O	HOH	53	59.306	51.362	16.242	1.00	31.71	O
HETATM 2759	O	HOH	54	58.726	37.969	34.720	1.00	37.12	O
HETATM 2760	O	HOH	55	59.306	53.739	20.688	1.00	31.48	O
HETATM 2761	O	HOH	56	52.755	51.235	37.729	1.00	38.98	O
HETATM 2762	O	HOH	57	77.948	70.194	25.195	1.00	40.94	O
HETATM 2763	O	HOH	58	42.877	43.465	23.430	1.00	37.12	O
HETATM 2764	O	HOH	59	74.941	70.159	31.554	1.00	37.95	O
HETATM 2765	O	HOH	60	62.836	39.227	5.777	1.00	41.89	O
HETATM 2766	O	HOH	61	63.043	31.312	25.273	1.00	42.37	O
HETATM 2767	O	HOH	62	73.944	59.700	37.703	1.00	39.09	O
HETATM 2768	O	HOH	63	45.718	48.708	27.281	1.00	38.46	O
HETATM 2769	O	HOH	64	65.979	37.356	16.650	1.00	29.39	O
HETATM 2770	O	HOH	65	74.924	38.483	8.198	1.00	36.88	O
HETATM 2771	O	HOH	66	72.792	32.939	26.042	1.00	49.82	O
HETATM 2772	O	HOH	67	71.174	32.495	29.960	1.00	43.86	O
HETATM 2773	O	HOH	68	86.835	69.123	23.909	1.00	40.67	O
HETATM 2774	O	HOH	69	51.919	29.585	14.737	1.00	50.08	O

TABLE 5

HETATM	2775	O	HOH	70	74.502	36.683	10.729	1.00	38.28	O
HETATM	2776	O	HOH	71	74.398	47.611	35.605	1.00	39.16	O
HETATM	2777	O	HOH	72	73.613	50.462	36.144	1.00	32.41	O
HETATM	2778	O	HOH	73	54.489	46.459	17.581	1.00	46.38	O
HETATM	2779	O	HOH	74	73.145	64.449	30.898	1.00	37.64	O
HETATM	2780	O	HOH	75	69.890	53.682	17.707	1.00	40.51	O
HETATM	2781	O	HOH	76	44.394	42.781	15.412	1.00	49.08	O
HETATM	2782	O	HOH	77	59.413	50.782	9.634	1.00	33.53	O
HETATM	2783	O	HOH	78	68.121	74.231	33.089	1.00	42.30	O
HETATM	2784	O	HOH	79	58.561	44.690	5.902	1.00	40.98	O
HETATM	2785	O	HOH	80	65.000	31.161	29.173	1.00	52.37	O
HETATM	2786	O	HOH	81	74.095	34.670	40.190	1.00	36.19	O
HETATM	2787	O	HOH	82	78.806	36.429	24.680	1.00	48.73	O
HETATM	2788	O	HOH	83	72.866	40.403	41.762	1.00	43.72	O
HETATM	2789	O	HOH	84	71.162	55.709	41.847	1.00	30.47	O
HETATM	2790	O	HOH	85	50.170	31.463	16.442	1.00	46.81	O
HETATM	2791	O	HOH	86	55.811	30.709	8.794	1.00	49.33	O
HETATM	2792	O	HOH	87	61.016	73.187	39.258	1.00	46.28	O
HETATM	2793	O	HOH	88	83.287	41.191	17.129	1.00	48.85	O
HETATM	2794	O	HOH	89	85.733	38.892	22.703	1.00	43.02	O
HETATM	2795	O	HOH	90	67.617	53.275	46.890	1.00	44.36	O
HETATM	2796	O	HOH	91	76.440	36.363	6.407	1.00	60.32	O
HETATM	2797	O	HOH	92	74.688	38.584	30.945	1.00	34.79	O
HETATM	2798	O	HOH	93	57.076	65.531	38.139	1.00	47.34	O
HETATM	2799	O	HOH	94	78.761	38.342	17.426	1.00	41.15	O
HETATM	2800	O	HOH	95	61.259	33.096	26.930	1.00	44.33	O
HETATM	2801	O	HOH	96	65.482	28.592	14.900	1.00	41.37	O
HETATM	2802	O	HOH	97	93.557	52.441	21.951	1.00	58.36	O
HETATM	2803	O	HOH	98	52.048	50.238	18.507	1.00	50.58	O
HETATM	2804	O	HOH	99	69.144	44.907	46.298	1.00	41.41	O
HETATM	2805	O	HOH	100	92.572	46.733	19.480	1.00	53.29	O
HETATM	2806	O	HOH	101	60.394	50.886	46.427	1.00	58.13	O
HETATM	2807	O	HOH	102	60.206	29.776	22.560	1.00	51.85	O
HETATM	2808	O	HOH	103	55.550	45.667	5.832	1.00	54.36	O
HETATM	2809	O	HOH	104	66.124	45.356	49.309	1.00	55.34	O
HETATM	2810	O	HOH	105	42.594	47.628	27.697	1.00	57.72	O
HETATM	2811	O	HOH	106	78.097	71.838	27.740	1.00	51.84	O
HETATM	2812	O	HOH	107	74.276	62.445	19.161	1.00	40.85	O
HETATM	2813	O	HOH	108	47.828	41.389	36.858	1.00	50.41	O
HETATM	2814	O	HOH	109	71.642	67.017	32.073	1.00	37.86	O
HETATM	2815	O	HOH	110	74.696	67.506	33.229	1.00	57.41	O
HETATM	2816	O	HOH	111	75.703	52.363	36.244	1.00	30.66	O
HETATM	2817	O	HOH	112	73.719	66.099	18.701	1.00	56.53	O
HETATM	2818	O	HOH	113	51.821	45.822	7.467	1.00	52.27	O
HETATM	2819	O	HOH	114	81.307	38.594	20.656	1.00	70.73	O
HETATM	2820	O	HOH	115	81.169	38.251	23.961	1.00	41.30	O
HETATM	2821	O	HOH	116	45.113	41.184	12.778	1.00	63.00	O
HETATM	2822	O	HOH	117	68.809	39.136	48.780	1.00	38.97	O
HETATM	2823	O	HOH	118	62.055	33.092	29.952	1.00	52.24	O
HETATM	2824	O	HOH	119	51.760	31.011	12.019	1.00	58.64	O
HETATM	2825	O	HOH	120	59.767	32.566	33.591	1.00	52.66	O
HETATM	2826	O	HOH	121	56.985	32.023	26.849	1.00	57.15	O
HETATM	2827	O	HOH	122	60.737	40.820	44.361	1.00	56.30	O
HETATM	2828	O	HOH	123	64.564	25.631	14.455	1.00	43.27	O
HETATM	2829	O	HOH	124	49.818	53.007	23.891	1.00	49.86	O
HETATM	2830	O	HOH	125	50.978	50.308	21.539	1.00	35.65	O
HETATM	2831	O	HOH	126	67.755	31.430	25.861	1.00	55.46	O

HETATM	2832	O	HOH	127	48.199	31.294	25.210	1.00	54.24	O
HETATM	2833	O	HOH	128	73.604	54.433	12.696	1.00	61.45	O
HETATM	2834	O	HOH	129	70.275	57.346	14.361	1.00	41.07	O
HETATM	2835	O	HOH	130	74.635	45.539	32.754	1.00	32.00	O
HETATM	2836	O	HOH	131	75.089	72.613	28.286	1.00	49.39	O
HETATM	2837	O	HOH	132	86.853	66.678	30.930	1.00	25.20	O
HETATM	2838	O	HOH	133	78.835	40.047	31.875	1.00	31.20	O
HETATM	2839	O	HOH	134	62.167	61.367	37.551	1.00	30.60	O
HETATM	2840	O	HOH	135	65.184	28.026	26.437	1.00	48.57	O
HETATM	2841	O	HOH	136	76.047	40.918	32.141	1.00	34.64	O
HETATM	2842	O	HOH	137	59.729	41.105	39.908	1.00	47.69	O
HETATM	2843	O	HOH	138	70.728	75.819	32.304	1.00	53.80	O
HETATM	2844	O	HOH	139	81.807	75.821	23.632	1.00	51.16	O
HETATM	2845	O	HOH	140	79.607	73.914	25.874	1.00	49.38	O
HETATM	2846	O	HOH	141	44.883	44.348	32.806	1.00	49.33	O
HETATM	2847	O	HOH	142	74.170	42.608	43.856	1.00	52.82	O
HETATM	2848	O	HOH	143	53.514	41.420	6.894	1.00	48.12	O
HETATM	2849	O	HOH	144	76.967	51.935	3.952	1.00	54.45	O
HETATM	2850	O	HOH	145	82.602	55.478	15.958	1.00	37.47	O
HETATM	2851	O	HOH	146	58.199	49.374	44.387	1.00	54.43	O
HETATM	2852	O	HOH	147	53.891	73.194	38.807	1.00	45.80	O
HETATM	2853	O	HOH	148	48.842	61.463	23.357	1.00	44.65	O
HETATM	2854	O	HOH	149	49.731	59.561	25.854	1.00	55.20	O
HETATM	2855	O	HOH	150	51.048	56.764	24.880	1.00	58.92	O
HETATM	2856	O	HOH	151	52.529	57.301	22.316	1.00	49.02	O
HETATM	2857	O	HOH	152	46.169	58.096	27.292	1.00	44.50	O
HETATM	2858	O	HOH	153	40.023	51.519	24.080	1.00	57.09	O
HETATM	2859	O	HOH	154	70.783	28.023	10.528	1.00	65.20	O
HETATM	2860	O	HOH	155	55.358	44.178	39.610	1.00	55.31	O
HETATM	2861	O	HOH	156	50.499	52.835	39.274	1.00	56.09	O
HETATM	2862	O	HOH	157	51.427	49.112	39.630	1.00	50.88	O
HETATM	2863	O	HOH	158	54.238	33.150	37.602	1.00	49.72	O
HETATM	2864	O	HOH	159	62.155	53.228	-3.383	1.00	55.20	O
HETATM	2865	O	HOH	160	65.352	58.405	21.237	1.00	40.73	O
HETATM	2866	O	HOH	161	55.476	50.398	2.549	1.00	58.50	O
HETATM	2867	O	HOH	162	73.645	34.699	8.566	1.00	52.83	O
HETATM	2868	O	HOH	163	71.990	36.204	6.534	1.00	56.54	O
HETATM	2869	O	HOH	164	70.553	26.585	7.610	1.00	59.27	O
CONNECT	202	2464								
CONNECT	2464	202								
CONNECT	2638	2639	2640	2641	2642					
CONNECT	2639	2638								
CONNECT	2640	2638								
CONNECT	2641	2638	2643							
CONNECT	2642	2638								
CONNECT	2643	2641	2644							
CONNECT	2644	2643	2645	2660						
CONNECT	2645	2644	2646							
CONNECT	2646	2645	2647	2658						
CONNECT	2647	2646	2648	2657						
CONNECT	2648	2647	2649	2655						
CONNECT	2649	2648	2651							
CONNECT	2650	2651	2653							
CONNECT	2651	2649	2650	2652						
CONNECT	2652	2651								
CONNECT	2653	2650	2654	2655						
CONNECT	2654	2653								



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CONNECT 2655 2648 2653 2656
CONNECT 2656 2655 2657
CONNECT 2657 2647 2656
CONNECT 2658 2646 2659 2660
CONNECT 2659 2658
CONNECT 2660 2644 2658 2661
CONNECT 2661 2660
CONNECT 2662 2663 2664 2665 2684
CONNECT 2663 2662
CONNECT 2664 2662
CONNECT 2665 2662 2666
CONNECT 2666 2665 2667
CONNECT 2667 2666 2668 2669
CONNECT 2668 2667 2673
CONNECT 2669 2667 2670 2671
CONNECT 2670 2669
CONNECT 2671 2669 2672 2673
CONNECT 2672 2671
CONNECT 2673 2668 2671 2674
CONNECT 2674 2673 2675 2683
CONNECT 2675 2674 2676
CONNECT 2676 2675 2677
CONNECT 2677 2676 2678 2683
CONNECT 2678 2677 2679 2680
CONNECT 2679 2678
CONNECT 2680 2678 2681
CONNECT 2681 2680 2682
CONNECT 2682 2681 2683
CONNECT 2683 2674 2677 2682
CONNECT 2684 2662 2685
CONNECT 2685 2684 2686 2687 2688
CONNECT 2686 2685
CONNECT 2687 2685
CONNECT 2688 2685 2689
CONNECT 2689 2688 2690
CONNECT 2690 2689 2691 2692
CONNECT 2691 2690 2696
CONNECT 2692 2690 2693 2694
CONNECT 2693 2692
CONNECT 2694 2692 2695 2696
CONNECT 2695 2694
CONNECT 2696 2691 2694 2697
CONNECT 2697 2696 2698 2705
CONNECT 2698 2697 2699
CONNECT 2699 2698 2700 2703
CONNECT 2700 2699 2701 2702
CONNECT 2701 2700
CONNECT 2702 2700
CONNECT 2703 2699 2704
CONNECT 2704 2703 2705
CONNECT 2705 2697 2704
MASTER      527      0      3      13      18      0      0      6 2868      1      70      39
END

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Figure 14

P-UC 5440

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HEADER      OXIDOREDUCTASE                      08-AUG-02    1ME7
TITLE       INOSINE MONOPHOSPHATE DEHYDROGENASE (IMPDH) FROM
TITLE       2 TRITRICHOMONAS FOETUS WITH RVP AND MOA BOUND
COMPND      MOL_ID: 1;
COMPND      2 MOLECULE: INOSINE-5'-MONOPHOSPHATE DEHYDROGENASE;
COMPND      3 CHAIN: A;
COMPND      4 SYNONYM: IMP DEHYDROGENASE, IMPDH;
COMPND      5 EC: 1.1.1.205;
COMPND      6 ENGINEERED: YES
SOURCE      MOL_ID: 1;
SOURCE      2 ORGANISM_SCIENTIFIC: TRITRICHOMONAS FOETUS;
SOURCE      3 GENE: IMPDH;
SOURCE      4 EXPRESSION_SYSTEM: ESCHERICHIA COLI;
SOURCE      5 EXPRESSION_SYSTEM_COMMON: BACTERIA;
SOURCE      6 EXPRESSION_SYSTEM_STRAIN: H712;
SOURCE      7 EXPRESSION_SYSTEM_VECTOR_TYPE: PLASMID;
SOURCE      8 EXPRESSION_SYSTEM_PLASMID: PEACE
KEYWDS      ALPHA BETA BARREL
EXPDTA      X-RAY DIFFRACTION
AUTHOR      G.L.PROSISE,J.WU,H.LUECKE
JRNL        AUTH   G.L.PROSISE,J.WU,H.LUECKE
JRNL        TITL   CRYSTAL STRUCTURE OF T. FOETUS INOSINE
JRNL        TITL 2 MONOPHOSPHATE DEHYDROGENASE IN COMPLEX WITH THE
JRNL        TITL 3 INHIBITOR RIBAVIRIN REVEALS A CATALYSIS-DEPENDENT
JRNL        TITL 4 ION BINDING SITE
JRNL        REF    TO BE PUBLISHED
JRNL        REFN
REMARK      1
REMARK      2
REMARK      2 RESOLUTION. 2.15 ANGSTROMS.
REMARK      3
REMARK      3 REFINEMENT.
REMARK      3   PROGRAM       : CNS 1.1
REMARK      3   AUTHORS      : BRUNGER,ADAMS,CLORE,DELANO,GROS,GROSSE-
REMARK      3                   : KUNSTLEVE,JIANG,KUSZEWSKI,NILGES, PANNU,
REMARK      3                   : READ,RICE,SIMONSON,WARREN
REMARK      3
REMARK      3 REFINEMENT TARGET : ENGH & HUBER
REMARK      3
REMARK      3 DATA USED IN REFINEMENT.
REMARK      3   RESOLUTION RANGE HIGH (ANGSTROMS) : 2.15
REMARK      3   RESOLUTION RANGE LOW  (ANGSTROMS) : 49.04
REMARK      3   DATA CUTOFF              (SIGMA(F)) : 0.000
REMARK      3   OUTLIER CUTOFF HIGH (RMS (ABS(F))) : NULL
REMARK      3   COMPLETENESS (WORKING+TEST) (%) : 94.0
REMARK      3   NUMBER OF REFLECTIONS              : 32980
REMARK      3
REMARK      3 FIT TO DATA USED IN REFINEMENT.
REMARK      3   CROSS-VALIDATION METHOD              : THROUGHOUT
REMARK      3   FREE R VALUE TEST SET SELECTION      : RANDOM
REMARK      3   R VALUE                  (WORKING SET) : 0.233
REMARK      3   FREE R VALUE                      : 0.264
REMARK      3   FREE R VALUE TEST SET SIZE (%)      : 5.200
REMARK      3   FREE R VALUE TEST SET COUNT          : 1712
REMARK      3   ESTIMATED ERROR OF FREE R VALUE    : 0.006
REMARK      3
REMARK      3 FIT IN THE HIGHEST RESOLUTION BIN.

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REMARK 3 TOTAL NUMBER OF BINS USED : 6
REMARK 3 BIN RESOLUTION RANGE HIGH (A) : 2.15
REMARK 3 BIN RESOLUTION RANGE LOW (A) : 2.28
REMARK 3 BIN COMPLETENESS (WORKING+TEST) (%) : 77.30
REMARK 3 REFLECTIONS IN BIN (WORKING SET) : 4218
REMARK 3 BIN R VALUE (WORKING SET) : 0.2880
REMARK 3 BIN FREE R VALUE : 0.3290
REMARK 3 BIN FREE R VALUE TEST SET SIZE (%) : 4.80
REMARK 3 BIN FREE R VALUE TEST SET COUNT : 215
REMARK 3 ESTIMATED ERROR OF BIN FREE R VALUE : 0.023
REMARK 3
REMARK 3 NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK 3 PROTEIN ATOMS : 2782
REMARK 3 NUCLEIC ACID ATOMS : 0
REMARK 3 HETEROGEN ATOMS : 46
REMARK 3 SOLVENT ATOMS : 120
REMARK 3
REMARK 3 B VALUES.
REMARK 3 FROM WILSON PLOT (A**2) : 33.10
REMARK 3 MEAN B VALUE (OVERALL, A**2) : 44.70
REMARK 3 OVERALL ANISOTROPIC B VALUE.
REMARK 3 B11 (A**2) : 0.00000
REMARK 3 B22 (A**2) : 0.00000
REMARK 3 B33 (A**2) : 0.00000
REMARK 3 B12 (A**2) : 0.00000
REMARK 3 B13 (A**2) : 0.00000
REMARK 3 B23 (A**2) : 0.00000
REMARK 3
REMARK 3 ESTIMATED COORDINATE ERROR.
REMARK 3 ESD FROM LUZZATI PLOT (A) : 0.29
REMARK 3 ESD FROM SIGMAA (A) : 0.25
REMARK 3 LOW RESOLUTION CUTOFF (A) : 5.00
REMARK 3
REMARK 3 CROSS-VALIDATED ESTIMATED COORDINATE ERROR.
REMARK 3 ESD FROM C-V LUZZATI PLOT (A) : 0.35
REMARK 3 ESD FROM C-V SIGMAA (A) : 0.28
REMARK 3
REMARK 3 RMS DEVIATIONS FROM IDEAL VALUES.
REMARK 3 BOND LENGTHS (A) : 0.006
REMARK 3 BOND ANGLES (DEGREES) : 1.20
REMARK 3 DIHEDRAL ANGLES (DEGREES) : 22.50
REMARK 3 IMPROPER ANGLES (DEGREES) : 0.71
REMARK 3
REMARK 3 ISOTROPIC THERMAL MODEL : RESTRAINED
REMARK 3
REMARK 3 ISOTROPIC THERMAL FACTOR RESTRAINTS. RMS SIGMA
REMARK 3 MAIN-CHAIN BOND (A**2) : 1.190 ; 1.500
REMARK 3 MAIN-CHAIN ANGLE (A**2) : 2.070 ; 2.000
REMARK 3 SIDE-CHAIN BOND (A**2) : 1.630 ; 2.000
REMARK 3 SIDE-CHAIN ANGLE (A**2) : 2.500 ; 2.500
REMARK 3
REMARK 3 BULK SOLVENT MODELING.
REMARK 3 METHOD USED : FLAT MODEL
REMARK 3 KSOL : 0.36
REMARK 3 BSOL : 41.54
REMARK 3
REMARK 3 NCS MODEL : NULL

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REMARK 3
REMARK 3 NCS RESTRAINTS. RMS SIGMA/WEIGHT
REMARK 3 GROUP 1 POSITIONAL (A) : NULL ; NULL
REMARK 3 GROUP 1 B-FACTOR (A**2) : NULL ; NULL
REMARK 3
REMARK 3 PARAMETER FILE 1 : PROTEIN_REP.PARAM
REMARK 3 PARAMETER FILE 2 : PARAM.GNSOL
REMARK 3 PARAMETER FILE 3 : CIS_PEPTIDE.PARAM
REMARK 3 PARAMETER FILE 4 : RMP_MPA.PAR
REMARK 3 PARAMETER FILE 5 : ION.PARAM
REMARK 3 PARAMETER FILE 6 : NULL
REMARK 3 TOPOLOGY FILE 1 : PROTEIN.TOP
REMARK 3 TOPOLOGY FILE 2 : RMP.TOP
REMARK 3 TOPOLOGY FILE 3 : MPA.TOP
REMARK 3 TOPOLOGY FILE 4 : ION.TOP
REMARK 3 TOPOLOGY FILE 5 : TOPH.GNSOL
REMARK 3 TOPOLOGY FILE 6 : NULL
REMARK 3
REMARK 3 OTHER REFINEMENT REMARKS: NULL
REMARK 4
REMARK 4 1ME7 COMPLIES WITH FORMAT V. 2.3, 09-JULY-1998.
REMARK 100
REMARK 100 THIS ENTRY HAS BEEN PROCESSED BY RCSB ON 16-AUG-2002.
REMARK 100 THE RCSB ID CODE IS RCSB016849.
REMARK 200
REMARK 200 EXPERIMENTAL DETAILS
REMARK 200 EXPERIMENT TYPE : X-RAY DIFFRACTION
REMARK 200 DATE OF DATA COLLECTION : 12-JUN-2001
REMARK 200 TEMPERATURE (KELVIN) : 100.0
REMARK 200 PH : 7.50
REMARK 200 NUMBER OF CRYSTALS USED : 1
REMARK 200
REMARK 200 SYNCHROTRON (Y/N) : Y
REMARK 200 RADIATION SOURCE : SSRL
REMARK 200 BEAMLINE : 9-1
REMARK 200 X-RAY GENERATOR MODEL : NULL
REMARK 200 MONOCHROMATIC OR LAUE (M/L) : M
REMARK 200 WAVELENGTH OR RANGE (A) : 0.97
REMARK 200 MONOCHROMATOR : NULL
REMARK 200 OPTICS : NULL
REMARK 200
REMARK 200 DETECTOR TYPE : IMAGE PLATE
REMARK 200 DETECTOR MANUFACTURER : MARRESEARCH
REMARK 200 INTENSITY-INTEGRATION SOFTWARE : DENZO
REMARK 200 DATA SCALING SOFTWARE : SCALEPACK
REMARK 200
REMARK 200 NUMBER OF UNIQUE REFLECTIONS : 33143
REMARK 200 RESOLUTION RANGE HIGH (A) : 2.150
REMARK 200 RESOLUTION RANGE LOW (A) : 50.000
REMARK 200 REJECTION CRITERIA (SIGMA(I)) : 0.000
REMARK 200
REMARK 200 OVERALL.
REMARK 200 COMPLETENESS FOR RANGE (%) : 94.0
REMARK 200 DATA REDUNDANCY : 5.300
REMARK 200 R MERGE (I) : 0.07200
REMARK 200 R SYM (I) : NULL
REMARK 200 <I/SIGMA(I)> FOR THE DATA SET : 2.0500

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REMARK 200
REMARK 200 IN THE HIGHEST RESOLUTION SHELL.
REMARK 200 HIGHEST RESOLUTION SHELL, RANGE HIGH (A) : 2.15
REMARK 200 HIGHEST RESOLUTION SHELL, RANGE LOW (A) : 2.19
REMARK 200 COMPLETENESS FOR SHELL (%) : 79.5
REMARK 200 DATA REDUNDANCY IN SHELL : NULL
REMARK 200 R MERGE FOR SHELL (I) : 0.49100
REMARK 200 R SYM FOR SHELL (I) : NULL
REMARK 200 <I/SIGMA(I)> FOR SHELL : 2.050
REMARK 200
REMARK 200 DIFFRACTION PROTOCOL: SINGLE WAVELENGTH
REMARK 200 METHOD USED TO DETERMINE THE STRUCTURE: FOURIER SYNTHESIS
REMARK 200 SOFTWARE USED: CNS
REMARK 200 STARTING MODEL: PDB ENTRY 1AK5
REMARK 200
REMARK 200 REMARK: NULL
REMARK 280
REMARK 280 CRYSTAL
REMARK 280 SOLVENT CONTENT, VS (%) : NULL
REMARK 280 MATTHEWS COEFFICIENT, VM (ANGSTROMS**3/DA) : NULL
REMARK 280
REMARK 280 CRYSTALLIZATION CONDITIONS: SODIUM MALONATE, TRIS, 2-
REMARK 280 MERCAPTOETHANOL, EDTA, GLYCEROL
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY
REMARK 290 SYMMETRY OPERATORS FOR SPACE GROUP: P 4 3 2
REMARK 290
REMARK 290      SYMOP      SYMMETRY
REMARK 290      NNNMMM      OPERATOR
REMARK 290      1555      X,Y,Z
REMARK 290      2555      -X,-Y,Z
REMARK 290      3555      -X,Y,-Z
REMARK 290      4555      X,-Y,-Z
REMARK 290      5555      Z,X,Y
REMARK 290      6555      Z,-X,-Y
REMARK 290      7555      -Z,-X,Y
REMARK 290      8555      -Z,X,-Y
REMARK 290      9555      Y,Z,X
REMARK 290      10555     -Y,Z,-X
REMARK 290      11555     Y,-Z,-X
REMARK 290      12555     -Y,-Z,X
REMARK 290      13555     Y,X,-Z
REMARK 290      14555     -Y,-X,-Z
REMARK 290      15555     Y,-X,Z
REMARK 290      16555     -Y,X,Z
REMARK 290      17555     X,Z,-Y
REMARK 290      18555     -X,Z,Y
REMARK 290      19555     -X,-Z,-Y
REMARK 290      20555     X,-Z,Y
REMARK 290      21555     Z,Y,-X
REMARK 290      22555     Z,-Y,X
REMARK 290      23555     -Z,Y,X
REMARK 290      24555     -Z,-Y,-X
REMARK 290
REMARK 290      WHERE NNN -> OPERATOR NUMBER
REMARK 290      MMM -> TRANSLATION VECTOR
REMARK 290

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REMARK 290 CRYSTALLOGRAPHIC SYMMETRY TRANSFORMATIONS  
REMARK 290 THE FOLLOWING TRANSFORMATIONS OPERATE ON THE ATOM/HETATM  
REMARK 290 RECORDS IN THIS ENTRY TO PRODUCE CRYSTALLOGRAPHICALLY  
REMARK 290 RELATED MOLECULES.

REMARK 290	SMTRY1	1	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	1	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY3	1	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	2	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	2	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY3	2	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	3	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	3	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY3	3	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	4	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	4	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY3	4	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	5	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY2	5	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	5	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY1	6	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY2	6	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	6	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	7	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY2	7	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	7	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY1	8	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY2	8	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	8	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	9	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	9	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	9	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	10	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	10	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	10	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	11	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	11	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY3	11	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	12	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	12	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY3	12	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	13	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	13	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	13	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	14	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	14	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	14	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	15	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	15	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	15	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	16	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	16	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	16	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	17	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	17	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	17	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	18	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	18	0.000000	0.000000	1.000000	0.000000

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REMARK 290 SMTRY3 18 0.000000 1.000000 0.000000 0.000000
REMARK 290 SMTRY1 19 -1.000000 0.000000 0.000000 0.000000
REMARK 290 SMTRY2 19 0.000000 0.000000 -1.000000 0.000000
REMARK 290 SMTRY3 19 0.000000 -1.000000 0.000000 0.000000
REMARK 290 SMTRY1 20 1.000000 0.000000 0.000000 0.000000
REMARK 290 SMTRY2 20 0.000000 0.000000 -1.000000 0.000000
REMARK 290 SMTRY3 20 0.000000 1.000000 0.000000 0.000000
REMARK 290 SMTRY1 21 0.000000 0.000000 1.000000 0.000000
REMARK 290 SMTRY2 21 0.000000 1.000000 0.000000 0.000000
REMARK 290 SMTRY3 21 -1.000000 0.000000 0.000000 0.000000
REMARK 290 SMTRY1 22 0.000000 0.000000 1.000000 0.000000
REMARK 290 SMTRY2 22 0.000000 -1.000000 0.000000 0.000000
REMARK 290 SMTRY3 22 1.000000 0.000000 0.000000 0.000000
REMARK 290 SMTRY1 23 0.000000 0.000000 -1.000000 0.000000
REMARK 290 SMTRY2 23 0.000000 1.000000 0.000000 0.000000
REMARK 290 SMTRY3 23 1.000000 0.000000 0.000000 0.000000
REMARK 290 SMTRY1 24 0.000000 0.000000 -1.000000 0.000000
REMARK 290 SMTRY2 24 0.000000 -1.000000 0.000000 0.000000
REMARK 290 SMTRY3 24 -1.000000 0.000000 0.000000 0.000000
REMARK 290
REMARK 290 REMARK: NULL
REMARK 300
REMARK 300 BIOMOLECULE: 1
REMARK 300 THIS ENTRY CONTAINS THE CRYSTALLOGRAPHIC ASYMMETRIC UNIT
REMARK 300 WHICH CONSISTS OF 1 CHAIN(S). SEE REMARK 350 FOR
REMARK 300 INFORMATION ON GENERATING THE BIOLOGICAL MOLECULE(S).
REMARK 350
REMARK 350 GENERATING THE BIOMOLECULE
REMARK 350 COORDINATES FOR A COMPLETE MULTIMER REPRESENTING THE KNOWN
REMARK 350 BIOLOGICALLY SIGNIFICANT OLIGOMERIZATION STATE OF THE
REMARK 350 MOLECULE CAN BE GENERATED BY APPLYING BIOMT TRANSFORMATIONS
REMARK 350 GIVEN BELOW. BOTH NON-CRYSTALLOGRAPHIC AND
REMARK 350 CRYSTALLOGRAPHIC OPERATIONS ARE GIVEN.
REMARK 350
REMARK 350 BIOMOLECULE: 1
REMARK 350 APPLY THE FOLLOWING TO CHAINS: A
REMARK 350 BIOMT1 1 1.000000 0.000000 0.000000 0.000000
REMARK 350 BIOMT2 1 0.000000 1.000000 0.000000 0.000000
REMARK 350 BIOMT3 1 0.000000 0.000000 1.000000 0.000000
REMARK 350 BIOMT1 2 -1.000000 0.000000 0.000000 155.06800
REMARK 350 BIOMT2 2 0.000000 -1.000000 0.000000 155.06800
REMARK 350 BIOMT3 2 0.000000 0.000000 1.000000 0.000000
REMARK 350 BIOMT1 3 0.000000 1.000000 0.000000 0.000000
REMARK 350 BIOMT2 3 -1.000000 0.000000 0.000000 155.06800
REMARK 350 BIOMT3 3 0.000000 0.000000 1.000000 0.000000
REMARK 350 BIOMT1 4 0.000000 -1.000000 0.000000 155.06800
REMARK 350 BIOMT2 4 1.000000 0.000000 0.000000 0.000000
REMARK 350 BIOMT3 4 0.000000 0.000000 1.000000 0.000000
REMARK 465
REMARK 465 MISSING RESIDUES
REMARK 465 THE FOLLOWING RESIDUES WERE NOT LOCATED IN THE
REMARK 465 EXPERIMENT. (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 465 IDENTIFIER; SSSEQ=SEQUENCE NUMBER; I=INSERTION CODE.)
REMARK 465
REMARK 465 M RES C SSSEQI
REMARK 465 MET A 1
REMARK 465 SER A 108

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REMARK 465	ASN A	109
REMARK 465	VAL A	110
REMARK 465	LYS A	111
REMARK 465	PRO A	112
REMARK 465	ASP A	113
REMARK 465	GLN A	114
REMARK 465	THR A	115
REMARK 465	PHE A	116
REMARK 465	ALA A	117
REMARK 465	ASP A	118
REMARK 465	VAL A	119
REMARK 465	LEU A	120
REMARK 465	ALA A	121
REMARK 465	ILE A	122
REMARK 465	SER A	123
REMARK 465	GLN A	124
REMARK 465	ARG A	125
REMARK 465	THR A	126
REMARK 465	THR A	127
REMARK 465	HIS A	128
REMARK 465	ASN A	129
REMARK 465	THR A	130
REMARK 465	VAL A	131
REMARK 465	ALA A	132
REMARK 465	VAL A	133
REMARK 465	THR A	134
REMARK 465	ASP A	135
REMARK 465	ASP A	136
REMARK 465	GLY A	137
REMARK 465	THR A	138
REMARK 465	PRO A	139
REMARK 465	HIS A	140
REMARK 465	GLY A	141
REMARK 465	VAL A	142
REMARK 465	LEU A	143
REMARK 465	LEU A	144
REMARK 465	GLY A	145
REMARK 465	LEU A	146
REMARK 465	VAL A	147
REMARK 465	THR A	148
REMARK 465	GLN A	149
REMARK 465	ARG A	150
REMARK 465	ASP A	151
REMARK 465	TYR A	152
REMARK 465	PRO A	153
REMARK 465	ILE A	154
REMARK 465	ASP A	155
REMARK 465	LEU A	156
REMARK 465	THR A	157
REMARK 465	GLN A	158
REMARK 465	THR A	159
REMARK 465	GLU A	160
REMARK 465	THR A	161
REMARK 465	LYS A	162
REMARK 465	VAL A	163
REMARK 465	SER A	164
REMARK 465	ASP A	165



REMARK 465	MET A	166
REMARK 465	MET A	167
REMARK 465	THR A	168
REMARK 465	PRO A	169
REMARK 465	PHE A	170
REMARK 465	SER A	171
REMARK 465	LYS A	172
REMARK 465	LEU A	173
REMARK 465	VAL A	174
REMARK 465	THR A	175
REMARK 465	ALA A	176
REMARK 465	HIS A	177
REMARK 465	GLN A	178
REMARK 465	ASP A	179
REMARK 465	THR A	180
REMARK 465	LYS A	181
REMARK 465	LEU A	182
REMARK 465	SER A	183
REMARK 465	GLU A	184
REMARK 465	ALA A	185
REMARK 465	ASN A	186
REMARK 465	LYS A	187
REMARK 465	ILE A	188
REMARK 465	ILE A	189
REMARK 465	TRP A	190
REMARK 465	GLU A	191
REMARK 465	LYS A	192
REMARK 465	LYS A	193
REMARK 465	LEU A	194
REMARK 465	ASN A	195
REMARK 465	ALA A	196
REMARK 465	LEU A	197
REMARK 465	PRO A	198
REMARK 465	ILE A	199
REMARK 465	ILE A	200
REMARK 465	ASP A	201
REMARK 465	ASP A	202
REMARK 465	ASP A	203
REMARK 465	GLN A	204
REMARK 465	HIS A	205
REMARK 465	LEU A	206
REMARK 465	ARG A	207
REMARK 465	TYR A	208
REMARK 465	ILE A	209
REMARK 465	VAL A	210
REMARK 465	PHE A	211
REMARK 465	ARG A	212
REMARK 465	LYS A	213
REMARK 465	ASP A	214
REMARK 465	TYR A	215
REMARK 465	ASP A	216
REMARK 465	ARG A	217
REMARK 465	SER A	218
REMARK 465	GLN A	219
REMARK 465	GLN A	417
REMARK 465	ARG A	418
REMARK 465	TYR A	419

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REMARK 465      ASP A   420
REMARK 465      LEU A   421
REMARK 465      GLY A   422
REMARK 465      GLY A   423
REMARK 465      LYS A   424
REMARK 465      GLN A   425
REMARK 465      LYS A   426
REMARK 465      LEU A   427
REMARK 465      SER A   428
REMARK 465      PHE A   429
REMARK 465      GLU A   430
REMARK 465      VAL A   493
REMARK 465      LYS A   494
REMARK 465      ASP A   495
REMARK 465      ARG A   496
REMARK 465      ILE A   497
REMARK 465      ASN A   498
REMARK 465      ASP A   499
REMARK 465      TYR A   500
REMARK 465      HIS A   501
REMARK 465      PRO A   502
REMARK 465      LYS A   503
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND LENGTHS
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,2(A3,1X,A1,I4,A1,1X,A4,3X),F6.3)
REMARK 500
REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991
REMARK 500
REMARK 500  M RES CSSEQI ATM1   RES CSSEQI ATM2   DEVIATION
REMARK 500      ASP A 107  OD2   ASP A 107   CG      0.080
REMARK 500      MET A 373   CE   MET A 373   SD      0.038
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND ANGLES
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,3(1X,A4,2X),12X,F5.1)
REMARK 500
REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991
REMARK 500
REMARK 500  M RES CSSEQI ATM1   ATM2   ATM3
REMARK 500      GLY A 20   N   -   CA   -   C   ANGL. DEV. = -7.6 DEGREES
REMARK 500      ILE A 27   N   -   CA   -   C   ANGL. DEV. = -7.8 DEGREES
REMARK 500      ILE A 52   N   -   CA   -   C   ANGL. DEV. = -7.9 DEGREES

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REMARK 500 SER A 63 N - CA - C ANGL. DEV. = 8.1 DEGREES  
 REMARK 500 GLY A 64 N - CA - C ANGL. DEV. = -7.5 DEGREES  
 REMARK 500 GLY A 305 N - CA - C ANGL. DEV. = 7.5 DEGREES  
 REMARK 500 SER A 357 N - CA - C ANGL. DEV. = -7.4 DEGREES  
 REMARK 500 LYS A 444 N - CA - C ANGL. DEV. = 7.7 DEGREES  
 REMARK 500 LYS A 472 N - CA - C ANGL. DEV. = 7.6 DEGREES  
 REMARK 500 LYS A 474 N - CA - C ANGL. DEV. = -9.1 DEGREES  
 REMARK 500 LEU A 477 N - CA - C ANGL. DEV. = -8.2 DEGREES  
 REMARK 900  
 REMARK 900 RELATED ENTRIES  
 REMARK 900 RELATED ID: 1AK5 RELATED DB: PDB  
 REMARK 900 INOSINE MONOPHOSPHATE DEHYDROGENASE (IMPDH) FROM  
 REMARK 900 TRITRICHOMONAS FOETUS  
 REMARK 900 RELATED ID: 1ME8 RELATED DB: PDB  
 REMARK 900 1ME8 CONTAINS THE SAME PROTEIN WITH RVP BOUND  
 REMARK 900 RELATED ID: 1ME9 RELATED DB: PDB  
 REMARK 900 1ME9 CONTAINS THE SAME PROTEIN WITH IMP BOUND  
 REMARK 900 RELATED ID: 1MEH RELATED DB: PDB  
 REMARK 900 1MEH CONTAINS THE SAME PROTEIN WITH IMP AND MOA BOUND  
 REMARK 900 RELATED ID: 1MEI RELATED DB: PDB  
 REMARK 900 1MEI CONTAINS THE SAME PROTEIN WITH XMP AND MYCOPHENOLIC  
 REMARK 900 ACID BOUND  
 REMARK 900 RELATED ID: 1MEW RELATED DB: PDB  
 REMARK 900 1MEW CONTAINS THE SAME PROTEIN WITH XMP AND NAD BOUND  
 DBREF 1ME7 A 1 503 SWS P50097 IMDH\_TRIFO 1 503  
 SEQRES 1 A 503 MET ALA LYS TYR TYR ASN GLU PRO CYS HIS THR PHE ASN  
 SEQRES 2 A 503 GLU TYR LEU LEU ILE PRO GLY LEU SER THR VAL ASP CYS  
 SEQRES 3 A 503 ILE PRO SER ASN VAL ASN LEU SER THR PRO LEU VAL LYS  
 SEQRES 4 A 503 PHE GLN LYS GLY GLN GLN SER GLU ILE ASN LEU LYS ILE  
 SEQRES 5 A 503 PRO LEU VAL SER ALA ILE MET GLN SER VAL SER GLY GLU  
 SEQRES 6 A 503 LYS MET ALA ILE ALA LEU ALA ARG GLU GLY GLY ILE SER  
 SEQRES 7 A 503 PHE ILE PHE GLY SER GLN SER ILE GLU SER GLN ALA ALA  
 SEQRES 8 A 503 MET VAL HIS ALA VAL LYS ASN PHE LYS ALA GLY PHE VAL  
 SEQRES 9 A 503 VAL SER ASP SER ASN VAL LYS PRO ASP GLN THR PHE ALA  
 SEQRES 10 A 503 ASP VAL LEU ALA ILE SER GLN ARG THR THR HIS ASN THR  
 SEQRES 11 A 503 VAL ALA VAL THR ASP ASP GLY THR PRO HIS GLY VAL LEU  
 SEQRES 12 A 503 LEU GLY LEU VAL THR GLN ARG ASP TYR PRO ILE ASP LEU  
 SEQRES 13 A 503 THR GLN THR GLU THR LYS VAL SER ASP MET MET THR PRO  
 SEQRES 14 A 503 PHE SER LYS LEU VAL THR ALA HIS GLN ASP THR LYS LEU  
 SEQRES 15 A 503 SER GLU ALA ASN LYS ILE ILE TRP GLU LYS LYS LEU ASN  
 SEQRES 16 A 503 ALA LEU PRO ILE ILE ASP ASP ASP GLN HIS LEU ARG TYR  
 SEQRES 17 A 503 ILE VAL PHE ARG LYS ASP TYR ASP ARG SER GLN VAL CYS  
 SEQRES 18 A 503 HIS ASN GLU LEU VAL ASP SER GLN LYS ARG TYR LEU VAL  
 SEQRES 19 A 503 GLY ALA GLY ILE ASN THR ARG ASP PHE ARG GLU ARG VAL  
 SEQRES 20 A 503 PRO ALA LEU VAL GLU ALA GLY ALA ASP VAL LEU CYS ILE  
 SEQRES 21 A 503 ASP SER SER ASP GLY PHE SER GLU TRP GLN LYS ILE THR  
 SEQRES 22 A 503 ILE GLY TRP ILE ARG GLU LYS TYR GLY ASP LYS VAL LYS  
 SEQRES 23 A 503 VAL GLY ALA GLY ASN ILE VAL ASP GLY GLU GLY PHE ARG  
 SEQRES 24 A 503 TYR LEU ALA ASP ALA GLY ALA ASP PHE ILE LYS ILE GLY  
 SEQRES 25 A 503 ILE GLY GLY GLY SER ILE CYS ILE THR ARG GLU GLN LYS  
 SEQRES 26 A 503 GLY ILE GLY ARG GLY GLN ALA THR ALA VAL ILE ASP VAL  
 SEQRES 27 A 503 VAL ALA GLU ARG ASN LYS TYR PHE GLU GLU THR GLY ILE  
 SEQRES 28 A 503 TYR ILE PRO VAL CYS SER ASP GLY GLY ILE VAL TYR ASP  
 SEQRES 29 A 503 TYR HIS MET THR LEU ALA LEU ALA MET GLY ALA ASP PHE  
 SEQRES 30 A 503 ILE MET LEU GLY ARG TYR PHE ALA ARG PHE GLU GLU SER  
 SEQRES 31 A 503 PRO THR ARG LYS VAL THR ILE ASN GLY SER VAL MET LYS  
 SEQRES 32 A 503 GLU TYR TRP GLY GLU GLY SER SER ARG ALA ARG ASN TRP

SEQRES	33	A	503	GLN	ARG	TYR	ASP	LEU	GLY	GLY	LYS	GLN	LYS	LEU	SER	PHE		
SEQRES	34	A	503	GLU	GLU	GLY	VAL	ASP	SER	TYR	VAL	PRO	TYR	ALA	GLY	LYS		
SEQRES	35	A	503	LEU	LYS	ASP	ASN	VAL	GLU	ALA	SER	LEU	ASN	LYS	VAL	LYS		
SEQRES	36	A	503	SER	THR	MET	CYS	ASN	CYS	GLY	ALA	LEU	THR	ILE	PRO	GLN		
SEQRES	37	A	503	LEU	GLN	SER	LYS	ALA	LYS	ILE	THR	LEU	VAL	SER	SER	VAL		
SEQRES	38	A	503	SER	ILE	VAL	GLU	GLY	GLY	ALA	HIS	ASP	VAL	ILE	VAL	LYS		
SEQRES	39	A	503	ASP	ARG	ILE	ASN	ASP	TYR	HIS	PRO	LYS						
HET	NA		901															
HET	K	A	900															
HET	RVP		602															
HET	MOA		600															
HETNAM		NA		SODIUM ION														
HETNAM		K		POTASSIUM ION														
HETNAM		RVP		RIBAVIRIN MONOPHOSPHATE														
HETNAM		MOA		MYCOPHENOLIC ACID														
HETSYN		MOA		6-(1,3-DIHYDRO-7-HYDROXY-5-METHOXY-4-METHYL-1-														
HETSYN	2	MOA		OXOISOBENZOFURAN-6-YL)-4-METHYL-4-HEXANOIC ACID														
FORMUL	2	NA		NA1	1+													
FORMUL	3	K		K1	1+													
FORMUL	4	RVP		C8	H13	N4	O8	P1										
FORMUL	5	MOA		C17	H20	O6												
FORMUL	6	HOH		*120	(H2	O1)												
HELIX	1	1	THR	A	11	ASN	A	13	5								3	
HELIX	2	2	ILE	A	27	VAL	A	31	5								5	
HELIX	3	3	GLY	A	64	GLU	A	74	1								11	
HELIX	4	4	SER	A	85	ASN	A	98	1								14	
HELIX	5	5	ASP	A	242	ALA	A	253	1								12	
HELIX	6	6	SER	A	267	GLY	A	282	1								16	
HELIX	7	7	ASP	A	283	VAL	A	285	5								3	
HELIX	8	8	ASP	A	294	ALA	A	304	1								11	
HELIX	9	9	GLY	A	330	GLY	A	350	1								21	
HELIX	10	10	TYR	A	363	MET	A	373	1								11	
HELIX	11	11	GLY	A	381	ARG	A	386	1								6	
HELIX	12	12	LYS	A	442	CYS	A	461	1								20	
HELIX	13	13	THR	A	465	ALA	A	473	1								9	
SHEET	1	A	2	TYR	A	15	ILE	A	18	0								
SHEET	2	A	2	LYS	A	474	LEU	A	477	-1	O	LYS	A	474	N	ILE	A	18
SHEET	1	B	2	THR	A	35	PRO	A	36	0								
SHEET	2	B	2	ASN	A	49	LEU	A	50	-1	O	LEU	A	50	N	THR	A	35
SHEET	1	C	2	PHE	A	40	GLN	A	41	0								
SHEET	2	C	2	ILE	A	351	TYR	A	352	-1	O	TYR	A	352	N	PHE	A	40
SHEET	1	D	9	LEU	A	54	SER	A	56	0								
SHEET	2	D	9	ILE	A	77	ILE	A	80	1	O	ILE	A	77	N	SER	A	56
SHEET	3	D	9	GLY	A	235	ILE	A	238	1	O	GLY	A	237	N	ILE	A	80
SHEET	4	D	9	VAL	A	257	ILE	A	260	1	O	CYS	A	259	N	ILE	A	238
SHEET	5	D	9	VAL	A	287	ILE	A	292	1	O	GLY	A	288	N	LEU	A	258
SHEET	6	D	9	PHE	A	308	ILE	A	311	1	O	LYS	A	310	N	ALA	A	289
SHEET	7	D	9	VAL	A	355	ASP	A	358	1	O	CYS	A	356	N	ILE	A	311
SHEET	8	D	9	PHE	A	377	LEU	A	380	1	O	MET	A	379	N	SER	A	357
SHEET	9	D	9	LEU	A	54	SER	A	56	1	N	VAL	A	55	O	ILE	A	378
SHEET	1	E	3	LYS	A	394	ILE	A	397	0								
SHEET	2	E	3	SER	A	400	TRP	A	406	-1	O	MET	A	402	N	VAL	A	395
SHEET	3	E	3	ASP	A	434	PRO	A	438	-1	O	SER	A	435	N	TYR	A	405
SSBOND	1	CYS	A	26		CYS	A	459										
CISPEP	1	GLY	A	290		ASN	A	291			0			1.08				
CRYST1	155.068	155.068	155.068	90.00	90.00	90.00	P	4	3	2							24	
ORIGX1		1.000000	0.000000	0.000000							0.000000							

TABLE 6

ORIGX2	0.000000	1.000000	0.000000	0.000000							
ORIGX3	0.000000	0.000000	1.000000	0.000000							
SCALE1	0.006449	0.000000	0.000000	0.000000							
SCALE2	0.000000	0.006449	0.000000	0.000000							
SCALE3	0.000000	0.000000	0.006449	0.000000							
ATOM	1	N	ALA	A	2	55.337	75.180	36.704	1.00	34.41	N
ATOM	2	CA	ALA	A	2	56.037	74.068	35.999	1.00	33.40	C
ATOM	3	C	ALA	A	2	57.330	73.693	36.728	1.00	33.89	C
ATOM	4	O	ALA	A	2	57.769	74.397	37.640	1.00	32.06	O
ATOM	5	CB	ALA	A	2	56.344	74.482	34.569	1.00	33.59	C
ATOM	6	N	LYS	A	3	57.931	72.578	36.328	1.00	33.85	N
ATOM	7	CA	LYS	A	3	59.175	72.132	36.943	1.00	35.52	C
ATOM	8	C	LYS	A	3	60.319	72.311	35.953	1.00	34.41	C
ATOM	9	O	LYS	A	3	60.214	71.899	34.800	1.00	34.80	O
ATOM	10	CB	LYS	A	3	59.086	70.654	37.343	1.00	38.16	C
ATOM	11	CG	LYS	A	3	60.364	70.140	38.018	1.00	42.91	C
ATOM	12	CD	LYS	A	3	60.512	68.625	37.892	1.00	46.63	C
ATOM	13	CE	LYS	A	3	61.851	68.159	38.443	1.00	48.14	C
ATOM	14	NZ	LYS	A	3	62.983	68.796	37.717	1.00	49.64	N
ATOM	15	N	TYR	A	4	61.410	72.915	36.413	1.00	33.82	N
ATOM	16	CA	TYR	A	4	62.582	73.157	35.576	1.00	34.00	C
ATOM	17	C	TYR	A	4	63.792	72.378	36.094	1.00	35.31	C
ATOM	18	O	TYR	A	4	63.748	71.806	37.179	1.00	35.23	O
ATOM	19	CB	TYR	A	4	62.886	74.661	35.548	1.00	32.00	C
ATOM	20	CG	TYR	A	4	61.771	75.471	34.930	1.00	31.34	C
ATOM	21	CD1	TYR	A	4	61.659	75.598	33.546	1.00	30.66	C
ATOM	22	CD2	TYR	A	4	60.793	76.070	35.726	1.00	32.52	C
ATOM	23	CE1	TYR	A	4	60.593	76.303	32.969	1.00	29.90	C
ATOM	24	CE2	TYR	A	4	59.726	76.776	35.158	1.00	30.38	C
ATOM	25	CZ	TYR	A	4	59.635	76.884	33.784	1.00	29.87	C
ATOM	26	OH	TYR	A	4	58.582	77.565	33.222	1.00	31.29	O
ATOM	27	N	TYR	A	5	64.867	72.351	35.314	1.00	36.84	N
ATOM	28	CA	TYR	A	5	66.072	71.630	35.708	1.00	38.47	C
ATOM	29	C	TYR	A	5	67.273	72.559	35.843	1.00	39.48	C
ATOM	30	O	TYR	A	5	67.312	73.636	35.243	1.00	39.29	O
ATOM	31	CB	TYR	A	5	66.377	70.519	34.698	1.00	37.98	C
ATOM	32	CG	TYR	A	5	65.243	69.530	34.551	1.00	38.25	C
ATOM	33	CD1	TYR	A	5	64.068	69.884	33.884	1.00	38.19	C
ATOM	34	CD2	TYR	A	5	65.320	68.258	35.128	1.00	37.95	C
ATOM	35	CE1	TYR	A	5	62.995	69.002	33.796	1.00	38.93	C
ATOM	36	CE2	TYR	A	5	64.251	67.363	35.050	1.00	38.15	C
ATOM	37	CZ	TYR	A	5	63.091	67.744	34.383	1.00	39.68	C
ATOM	38	OH	TYR	A	5	62.028	66.879	34.309	1.00	38.51	O
ATOM	39	N	ASN	A	6	68.249	72.136	36.641	1.00	40.42	N
ATOM	40	CA	ASN	A	6	69.450	72.931	36.876	1.00	41.21	C
ATOM	41	C	ASN	A	6	70.427	72.917	35.706	1.00	40.26	C
ATOM	42	O	ASN	A	6	71.205	73.851	35.543	1.00	40.88	O
ATOM	43	CB	ASN	A	6	70.164	72.432	38.134	1.00	44.17	C
ATOM	44	CG	ASN	A	6	69.365	72.682	39.400	1.00	48.00	C
ATOM	45	OD1	ASN	A	6	69.468	71.926	40.371	1.00	49.62	O
ATOM	46	ND2	ASN	A	6	68.574	73.757	39.405	1.00	49.76	N
ATOM	47	N	GLU	A	7	70.388	71.868	34.892	1.00	38.65	N
ATOM	48	CA	GLU	A	7	71.304	71.760	33.754	1.00	37.25	C
ATOM	49	C	GLU	A	7	70.606	71.443	32.441	1.00	34.73	C
ATOM	50	O	GLU	A	7	69.592	70.750	32.417	1.00	34.20	O
ATOM	51	CB	GLU	A	7	72.340	70.656	34.004	1.00	38.95	C
ATOM	52	CG	GLU	A	7	73.284	70.878	35.186	1.00	43.43	C

TABLE 6

ATOM	53	CD	GLU	A	7	74.155	72.110	35.020	1.00	45.61	C
ATOM	54	OE1	GLU	A	7	74.568	72.401	33.874	1.00	45.97	O
ATOM	55	OE2	GLU	A	7	74.438	72.779	36.040	1.00	49.17	O
ATOM	56	N	PRO	A	8	71.140	71.952	31.326	1.00	32.47	N
ATOM	57	CA	PRO	A	8	70.498	71.644	30.048	1.00	31.28	C
ATOM	58	C	PRO	A	8	70.855	70.188	29.731	1.00	31.10	C
ATOM	59	O	PRO	A	8	71.830	69.667	30.271	1.00	30.11	O
ATOM	60	CB	PRO	A	8	71.160	72.627	29.089	1.00	31.56	C
ATOM	61	CG	PRO	A	8	72.558	72.782	29.675	1.00	30.51	C
ATOM	62	CD	PRO	A	8	72.273	72.883	31.153	1.00	32.79	C
ATOM	63	N	CYS	A	9	70.077	69.522	28.882	1.00	30.22	N
ATOM	64	CA	CYS	A	9	70.389	68.137	28.531	1.00	29.58	C
ATOM	65	C	CYS	A	9	71.493	68.098	27.462	1.00	28.36	C
ATOM	66	O	CYS	A	9	71.727	69.096	26.772	1.00	26.35	O
ATOM	67	CB	CYS	A	9	69.124	67.414	28.046	1.00	31.88	C
ATOM	68	SG	CYS	A	9	68.260	68.177	26.653	1.00	38.35	S
ATOM	69	N	HIS	A	10	72.169	66.955	27.343	1.00	27.89	N
ATOM	70	CA	HIS	A	10	73.271	66.765	26.391	1.00	27.84	C
ATOM	71	C	HIS	A	10	73.107	65.471	25.593	1.00	28.16	C
ATOM	72	O	HIS	A	10	72.470	64.524	26.066	1.00	27.35	O
ATOM	73	CB	HIS	A	10	74.610	66.693	27.142	1.00	29.04	C
ATOM	74	CG	HIS	A	10	74.871	67.865	28.034	1.00	30.87	C
ATOM	75	ND1	HIS	A	10	75.329	69.075	27.560	1.00	30.98	N
ATOM	76	CD2	HIS	A	10	74.695	68.025	29.368	1.00	31.03	C
ATOM	77	CE1	HIS	A	10	75.423	69.931	28.563	1.00	30.39	C
ATOM	78	NE2	HIS	A	10	75.045	69.318	29.670	1.00	31.86	N
ATOM	79	N	THR	A	11	73.690	65.440	24.393	1.00	28.34	N
ATOM	80	CA	THR	A	11	73.642	64.268	23.505	1.00	30.45	C
ATOM	81	C	THR	A	11	75.019	63.582	23.511	1.00	29.54	C
ATOM	82	O	THR	A	11	75.994	64.158	23.987	1.00	29.40	O
ATOM	83	CB	THR	A	11	73.324	64.667	22.038	1.00	31.33	C
ATOM	84	OG1	THR	A	11	74.374	65.507	21.537	1.00	35.21	O
ATOM	85	CG2	THR	A	11	72.016	65.425	21.947	1.00	32.48	C
ATOM	86	N	PHE	A	12	75.095	62.368	22.964	1.00	30.67	N
ATOM	87	CA	PHE	A	12	76.349	61.606	22.916	1.00	32.58	C
ATOM	88	C	PHE	A	12	77.534	62.334	22.291	1.00	32.84	C
ATOM	89	O	PHE	A	12	78.664	62.178	22.745	1.00	32.45	O
ATOM	90	CB	PHE	A	12	76.155	60.280	22.167	1.00	32.22	C
ATOM	91	CG	PHE	A	12	75.231	59.318	22.859	1.00	32.84	C
ATOM	92	CD1	PHE	A	12	75.383	59.038	24.213	1.00	32.67	C
ATOM	93	CD2	PHE	A	12	74.217	58.682	22.152	1.00	32.52	C
ATOM	94	CE1	PHE	A	12	74.535	58.137	24.854	1.00	33.67	C
ATOM	95	CE2	PHE	A	12	73.364	57.777	22.783	1.00	32.40	C
ATOM	96	CZ	PHE	A	12	73.522	57.505	24.133	1.00	32.01	C
ATOM	97	N	ASN	A	13	77.280	63.111	21.242	1.00	34.83	N
ATOM	98	CA	ASN	A	13	78.341	63.850	20.564	1.00	35.40	C
ATOM	99	C	ASN	A	13	79.075	64.842	21.460	1.00	34.57	C
ATOM	100	O	ASN	A	13	80.147	65.319	21.096	1.00	34.83	O
ATOM	101	CB	ASN	A	13	77.783	64.602	19.349	1.00	39.42	C
ATOM	102	CG	ASN	A	13	77.635	63.714	18.130	1.00	44.49	C
ATOM	103	OD1	ASN	A	13	78.553	62.970	17.773	1.00	47.75	O
ATOM	104	ND2	ASN	A	13	76.482	63.796	17.473	1.00	48.05	N
ATOM	105	N	GLU	A	14	78.501	65.153	22.621	1.00	33.44	N
ATOM	106	CA	GLU	A	14	79.108	66.100	23.553	1.00	33.47	C
ATOM	107	C	GLU	A	14	80.050	65.462	24.572	1.00	33.77	C
ATOM	108	O	GLU	A	14	80.608	66.157	25.418	1.00	34.50	O
ATOM	109	CB	GLU	A	14	78.018	66.868	24.307	1.00	32.95	C

TABLE 6

ATOM	110	CG	GLU	A	14	77.087	67.648	23.406	1.00	33.19	C
ATOM	111	CD	GLU	A	14	76.050	68.434	24.175	1.00	32.32	C
ATOM	112	OE1	GLU	A	14	76.433	69.350	24.936	1.00	32.77	O
ATOM	113	OE2	GLU	A	14	74.852	68.131	24.016	1.00	31.82	O
ATOM	114	N	TYR	A	15	80.230	64.148	24.496	1.00	32.50	N
ATOM	115	CA	TYR	A	15	81.093	63.463	25.444	1.00	31.35	C
ATOM	116	C	TYR	A	15	82.280	62.747	24.829	1.00	32.01	C
ATOM	117	O	TYR	A	15	82.283	62.403	23.649	1.00	32.05	O
ATOM	118	CB	TYR	A	15	80.286	62.435	26.236	1.00	30.88	C
ATOM	119	CG	TYR	A	15	79.251	63.028	27.153	1.00	31.45	C
ATOM	120	CD1	TYR	A	15	79.571	63.380	28.462	1.00	31.97	C
ATOM	121	CD2	TYR	A	15	77.947	63.241	26.710	1.00	31.39	C
ATOM	122	CE1	TYR	A	15	78.614	63.928	29.314	1.00	33.72	C
ATOM	123	CE2	TYR	A	15	76.986	63.790	27.549	1.00	33.18	C
ATOM	124	CZ	TYR	A	15	77.321	64.129	28.846	1.00	32.92	C
ATOM	125	OH	TYR	A	15	76.363	64.677	29.669	1.00	36.12	O
ATOM	126	N	LEU	A	16	83.290	62.523	25.661	1.00	32.48	N
ATOM	127	CA	LEU	A	16	84.479	61.779	25.263	1.00	31.96	C
ATOM	128	C	LEU	A	16	84.859	60.959	26.486	1.00	30.88	C
ATOM	129	O	LEU	A	16	84.541	61.336	27.609	1.00	29.12	O
ATOM	130	CB	LEU	A	16	85.641	62.711	24.888	1.00	31.45	C
ATOM	131	CG	LEU	A	16	85.562	63.515	23.583	1.00	33.88	C
ATOM	132	CD1	LEU	A	16	86.829	64.331	23.436	1.00	34.99	C
ATOM	133	CD2	LEU	A	16	85.406	62.591	22.383	1.00	33.78	C
ATOM	134	N	LEU	A	17	85.521	59.830	26.261	1.00	31.45	N
ATOM	135	CA	LEU	A	17	85.977	58.966	27.347	1.00	32.43	C
ATOM	136	C	LEU	A	17	87.454	59.276	27.617	1.00	32.04	C
ATOM	137	O	LEU	A	17	88.245	59.410	26.678	1.00	32.62	O
ATOM	138	CB	LEU	A	17	85.840	57.489	26.944	1.00	31.23	C
ATOM	139	CG	LEU	A	17	84.423	56.919	26.852	1.00	32.03	C
ATOM	140	CD1	LEU	A	17	84.389	55.730	25.898	1.00	30.72	C
ATOM	141	CD2	LEU	A	17	83.943	56.532	28.243	1.00	29.59	C
ATOM	142	N	ILE	A	18	87.809	59.410	28.893	1.00	31.01	N
ATOM	143	CA	ILE	A	18	89.190	59.664	29.287	1.00	30.55	C
ATOM	144	C	ILE	A	18	89.743	58.306	29.717	1.00	30.47	C
ATOM	145	O	ILE	A	18	89.188	57.659	30.598	1.00	30.46	O
ATOM	146	CB	ILE	A	18	89.273	60.651	30.471	1.00	30.96	C
ATOM	147	CG1	ILE	A	18	88.794	62.035	30.026	1.00	31.21	C
ATOM	148	CG2	ILE	A	18	90.712	60.731	30.989	1.00	29.69	C
ATOM	149	CD1	ILE	A	18	88.792	63.066	31.139	1.00	32.55	C
ATOM	150	N	PRO	A	19	90.842	57.857	29.095	1.00	30.24	N
ATOM	151	CA	PRO	A	19	91.439	56.562	29.428	1.00	32.18	C
ATOM	152	C	PRO	A	19	91.766	56.336	30.903	1.00	31.60	C
ATOM	153	O	PRO	A	19	91.999	57.282	31.662	1.00	31.91	O
ATOM	154	CB	PRO	A	19	92.697	56.517	28.552	1.00	31.40	C
ATOM	155	CG	PRO	A	19	92.326	57.403	27.384	1.00	31.65	C
ATOM	156	CD	PRO	A	19	91.634	58.550	28.065	1.00	30.73	C
ATOM	157	N	GLY	A	20	91.757	55.062	31.285	1.00	31.52	N
ATOM	158	CA	GLY	A	20	92.092	54.655	32.638	1.00	31.25	C
ATOM	159	C	GLY	A	20	93.307	53.755	32.485	1.00	31.86	C
ATOM	160	O	GLY	A	20	93.903	53.696	31.403	1.00	30.12	O
ATOM	161	N	LEU	A	21	93.677	53.040	33.539	1.00	32.96	N
ATOM	162	CA	LEU	A	21	94.840	52.163	33.458	1.00	34.19	C
ATOM	163	C	LEU	A	21	94.525	50.904	32.669	1.00	33.97	C
ATOM	164	O	LEU	A	21	93.619	50.151	33.020	1.00	34.45	O
ATOM	165	CB	LEU	A	21	95.330	51.770	34.863	1.00	34.37	C
ATOM	166	CG	LEU	A	21	96.489	50.759	34.904	1.00	34.20	C

ATOM	167	CD1	LEU	A	21	97.700	51.336	34.182	1.00	30.55	C
ATOM	168	CD2	LEU	A	21	96.838	50.420	36.355	1.00	34.84	C
ATOM	169	N	SER	A	22	95.269	50.688	31.592	1.00	34.75	N
ATOM	170	CA	SER	A	22	95.079	49.502	30.774	1.00	36.74	C
ATOM	171	C	SER	A	22	96.083	48.451	31.233	1.00	38.35	C
ATOM	172	O	SER	A	22	97.294	48.668	31.165	1.00	36.70	O
ATOM	173	CB	SER	A	22	95.313	49.827	29.300	1.00	36.32	C
ATOM	174	OG	SER	A	22	94.402	50.807	28.845	1.00	37.15	O
ATOM	175	N	THR	A	23	95.575	47.318	31.706	1.00	40.20	N
ATOM	176	CA	THR	A	23	96.429	46.235	32.183	1.00	42.51	C
ATOM	177	C	THR	A	23	96.838	45.318	31.036	1.00	43.43	C
ATOM	178	O	THR	A	23	96.204	45.321	29.980	1.00	44.38	O
ATOM	179	CB	THR	A	23	95.711	45.414	33.258	1.00	42.79	C
ATOM	180	OG1	THR	A	23	94.456	44.957	32.744	1.00	45.13	O
ATOM	181	CG2	THR	A	23	95.461	46.263	34.492	1.00	43.22	C
ATOM	182	N	VAL	A	24	97.897	44.535	31.241	1.00	43.96	N
ATOM	183	CA	VAL	A	24	98.383	43.632	30.198	1.00	45.09	C
ATOM	184	C	VAL	A	24	97.369	42.587	29.737	1.00	45.87	C
ATOM	185	O	VAL	A	24	97.391	42.175	28.576	1.00	45.20	O
ATOM	186	CB	VAL	A	24	99.678	42.894	30.632	1.00	45.95	C
ATOM	187	CG1	VAL	A	24	100.823	43.893	30.783	1.00	45.49	C
ATOM	188	CG2	VAL	A	24	99.442	42.134	31.933	1.00	45.36	C
ATOM	189	N	ASP	A	25	96.479	42.159	30.628	1.00	47.13	N
ATOM	190	CA	ASP	A	25	95.489	41.159	30.244	1.00	50.41	C
ATOM	191	C	ASP	A	25	94.326	41.710	29.421	1.00	50.20	C
ATOM	192	O	ASP	A	25	93.519	40.940	28.909	1.00	50.81	O
ATOM	193	CB	ASP	A	25	94.936	40.430	31.479	1.00	52.89	C
ATOM	194	CG	ASP	A	25	94.232	41.361	32.446	1.00	56.19	C
ATOM	195	OD1	ASP	A	25	93.566	40.864	33.381	1.00	58.03	O
ATOM	196	OD2	ASP	A	25	94.345	42.590	32.281	1.00	59.03	O
ATOM	197	N	CYS	A	26	94.234	43.030	29.270	1.00	49.99	N
ATOM	198	CA	CYS	A	26	93.124	43.581	28.497	1.00	48.97	C
ATOM	199	C	CYS	A	26	93.408	43.743	27.018	1.00	49.15	C
ATOM	200	O	CYS	A	26	93.939	44.764	26.581	1.00	48.97	O
ATOM	201	CB	CYS	A	26	92.660	44.937	29.047	1.00	47.43	C
ATOM	202	SG	CYS	A	26	90.937	45.377	28.585	1.00	43.74	S
ATOM	203	N	ILE	A	27	93.054	42.722	26.250	1.00	49.92	N
ATOM	204	CA	ILE	A	27	93.204	42.774	24.810	1.00	50.73	C
ATOM	205	C	ILE	A	27	91.781	42.593	24.300	1.00	50.66	C
ATOM	206	O	ILE	A	27	90.960	41.941	24.953	1.00	50.24	O
ATOM	207	CB	ILE	A	27	94.111	41.644	24.271	1.00	52.78	C
ATOM	208	CG1	ILE	A	27	93.547	40.280	24.661	1.00	53.35	C
ATOM	209	CG2	ILE	A	27	95.530	41.814	24.810	1.00	52.47	C
ATOM	210	CD1	ILE	A	27	94.339	39.120	24.094	1.00	56.96	C
ATOM	211	N	PRO	A	28	91.460	43.188	23.145	1.00	50.63	N
ATOM	212	CA	PRO	A	28	90.126	43.096	22.548	1.00	50.44	C
ATOM	213	C	PRO	A	28	89.496	41.705	22.535	1.00	50.71	C
ATOM	214	O	PRO	A	28	88.329	41.545	22.895	1.00	50.80	O
ATOM	215	CB	PRO	A	28	90.349	43.653	21.148	1.00	50.84	C
ATOM	216	CG	PRO	A	28	91.336	44.746	21.407	1.00	50.51	C
ATOM	217	CD	PRO	A	28	92.325	44.085	22.356	1.00	50.67	C
ATOM	218	N	SER	A	29	90.265	40.700	22.131	1.00	50.62	N
ATOM	219	CA	SER	A	29	89.745	39.340	22.060	1.00	49.43	C
ATOM	220	C	SER	A	29	89.327	38.758	23.409	1.00	48.35	C
ATOM	221	O	SER	A	29	88.575	37.786	23.456	1.00	49.06	O
ATOM	222	CB	SER	A	29	90.767	38.416	21.383	1.00	51.07	C
ATOM	223	OG	SER	A	29	91.969	38.322	22.126	1.00	53.31	O



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ATOM	224	N	ASN	A	30	89.801	39.335	24.508	1.00	45.87	N
ATOM	225	CA	ASN	A	30	89.414	38.824	25.819	1.00	44.49	C
ATOM	226	C	ASN	A	30	88.238	39.593	26.433	1.00	42.49	C
ATOM	227	O	ASN	A	30	87.765	39.248	27.518	1.00	42.16	O
ATOM	228	CB	ASN	A	30	90.594	38.854	26.793	1.00	46.85	C
ATOM	229	CG	ASN	A	30	91.698	37.892	26.404	1.00	50.18	C
ATOM	230	OD1	ASN	A	30	91.443	36.831	25.828	1.00	52.17	O
ATOM	231	ND2	ASN	A	30	92.936	38.250	26.734	1.00	51.10	N
ATOM	232	N	VAL	A	31	87.768	40.632	25.746	1.00	38.75	N
ATOM	233	CA	VAL	A	31	86.651	41.422	26.258	1.00	36.68	C
ATOM	234	C	VAL	A	31	85.333	40.660	26.097	1.00	35.73	C
ATOM	235	O	VAL	A	31	85.033	40.127	25.034	1.00	33.64	O
ATOM	236	CB	VAL	A	31	86.558	42.802	25.538	1.00	36.09	C
ATOM	237	CG1	VAL	A	31	85.357	43.593	26.053	1.00	34.31	C
ATOM	238	CG2	VAL	A	31	87.839	43.598	25.782	1.00	35.58	C
ATOM	239	N	ASN	A	32	84.564	40.589	27.174	1.00	35.18	N
ATOM	240	CA	ASN	A	32	83.284	39.894	27.152	1.00	35.95	C
ATOM	241	C	ASN	A	32	82.173	40.938	27.055	1.00	35.44	C
ATOM	242	O	ASN	A	32	82.050	41.802	27.918	1.00	36.50	O
ATOM	243	CB	ASN	A	32	83.150	39.041	28.423	1.00	36.77	C
ATOM	244	CG	ASN	A	32	81.740	38.509	28.644	1.00	38.35	C
ATOM	245	OD1	ASN	A	32	80.908	38.499	27.739	1.00	37.24	O
ATOM	246	ND2	ASN	A	32	81.475	38.050	29.863	1.00	40.73	N
ATOM	247	N	LEU	A	33	81.373	40.863	25.995	1.00	34.92	N
ATOM	248	CA	LEU	A	33	80.291	41.822	25.799	1.00	34.68	C
ATOM	249	C	LEU	A	33	78.908	41.292	26.161	1.00	34.77	C
ATOM	250	O	LEU	A	33	77.900	41.799	25.663	1.00	35.47	O
ATOM	251	CB	LEU	A	33	80.282	42.329	24.348	1.00	34.75	C
ATOM	252	CG	LEU	A	33	81.474	43.173	23.894	1.00	35.98	C
ATOM	253	CD1	LEU	A	33	81.283	43.601	22.451	1.00	35.27	C
ATOM	254	CD2	LEU	A	33	81.621	44.392	24.799	1.00	35.37	C
ATOM	255	N	SER	A	34	78.851	40.275	27.016	1.00	33.98	N
ATOM	256	CA	SER	A	34	77.566	39.724	27.449	1.00	34.88	C
ATOM	257	C	SER	A	34	76.841	40.762	28.301	1.00	34.25	C
ATOM	258	O	SER	A	34	77.472	41.554	28.998	1.00	33.82	O
ATOM	259	CB	SER	A	34	77.770	38.456	28.284	1.00	35.12	C
ATOM	260	OG	SER	A	34	78.323	37.420	27.491	1.00	42.00	O
ATOM	261	N	THR	A	35	75.516	40.748	28.263	1.00	32.80	N
ATOM	262	CA	THR	A	35	74.754	41.708	29.034	1.00	31.26	C
ATOM	263	C	THR	A	35	73.342	41.170	29.282	1.00	31.11	C
ATOM	264	O	THR	A	35	72.798	40.424	28.466	1.00	31.76	O
ATOM	265	CB	THR	A	35	74.706	43.068	28.280	1.00	31.41	C
ATOM	266	OG1	THR	A	35	74.416	44.123	29.202	1.00	30.49	O
ATOM	267	CG2	THR	A	35	73.644	43.043	27.184	1.00	30.33	C
ATOM	268	N	PRO	A	36	72.736	41.530	30.422	1.00	29.74	N
ATOM	269	CA	PRO	A	36	71.385	41.070	30.758	1.00	30.21	C
ATOM	270	C	PRO	A	36	70.264	41.741	29.958	1.00	31.22	C
ATOM	271	O	PRO	A	36	70.291	42.953	29.713	1.00	31.11	O
ATOM	272	CB	PRO	A	36	71.284	41.366	32.253	1.00	30.05	C
ATOM	273	CG	PRO	A	36	72.114	42.613	32.397	1.00	27.96	C
ATOM	274	CD	PRO	A	36	73.322	42.310	31.529	1.00	28.83	C
ATOM	275	N	LEU	A	37	69.276	40.943	29.566	1.00	30.99	N
ATOM	276	CA	LEU	A	37	68.142	41.438	28.805	1.00	31.62	C
ATOM	277	C	LEU	A	37	66.910	41.656	29.683	1.00	32.81	C
ATOM	278	O	LEU	A	37	66.165	42.618	29.485	1.00	34.25	O
ATOM	279	CB	LEU	A	37	67.788	40.459	27.681	1.00	31.89	C
ATOM	280	CG	LEU	A	37	66.642	40.913	26.764	1.00	32.36	C

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ATOM	281	CD1	LEU	A	37	67.124	42.073	25.888	1.00	31.95	C
ATOM	282	CD2	LEU	A	37	66.175	39.757	25.892	1.00	31.83	C
ATOM	283	N	VAL	A	38	66.691	40.774	30.655	1.00	32.12	N
ATOM	284	CA	VAL	A	38	65.521	40.901	31.517	1.00	31.54	C
ATOM	285	C	VAL	A	38	65.869	40.922	33.004	1.00	32.49	C
ATOM	286	O	VAL	A	38	66.867	40.344	33.427	1.00	33.79	O
ATOM	287	CB	VAL	A	38	64.486	39.772	31.219	1.00	31.66	C
ATOM	288	CG1	VAL	A	38	64.026	39.872	29.765	1.00	28.94	C
ATOM	289	CG2	VAL	A	38	65.093	38.398	31.482	1.00	29.49	C
ATOM	290	N	LYS	A	39	65.025	41.584	33.789	1.00	31.86	N
ATOM	291	CA	LYS	A	39	65.246	41.742	35.219	1.00	33.55	C
ATOM	292	C	LYS	A	39	65.423	40.464	36.025	1.00	34.23	C
ATOM	293	O	LYS	A	39	64.893	39.415	35.678	1.00	34.30	O
ATOM	294	CB	LYS	A	39	64.112	42.560	35.842	1.00	34.12	C
ATOM	295	CG	LYS	A	39	62.743	41.886	35.791	1.00	34.26	C
ATOM	296	CD	LYS	A	39	61.727	42.681	36.588	1.00	34.93	C
ATOM	297	CE	LYS	A	39	60.368	41.981	36.614	1.00	35.16	C
ATOM	298	NZ	LYS	A	39	59.412	42.684	37.515	1.00	34.58	N
ATOM	299	N	PHE	A	40	66.175	40.592	37.114	1.00	34.89	N
ATOM	300	CA	PHE	A	40	66.454	39.499	38.032	1.00	36.02	C
ATOM	301	C	PHE	A	40	66.698	40.089	39.416	1.00	37.46	C
ATOM	302	O	PHE	A	40	66.849	41.303	39.562	1.00	38.06	O
ATOM	303	CB	PHE	A	40	67.687	38.699	37.582	1.00	34.23	C
ATOM	304	CG	PHE	A	40	68.926	39.535	37.376	1.00	33.77	C
ATOM	305	CD1	PHE	A	40	69.178	40.142	36.145	1.00	32.47	C
ATOM	306	CD2	PHE	A	40	69.844	39.704	38.405	1.00	31.36	C
ATOM	307	CE1	PHE	A	40	70.326	40.899	35.945	1.00	31.93	C
ATOM	308	CE2	PHE	A	40	70.998	40.460	38.218	1.00	31.43	C
ATOM	309	CZ	PHE	A	40	71.241	41.060	36.984	1.00	31.40	C
ATOM	310	N	GLN	A	41	66.728	39.227	40.427	1.00	38.80	N
ATOM	311	CA	GLN	A	41	66.954	39.653	41.800	1.00	40.40	C
ATOM	312	C	GLN	A	41	68.439	39.656	42.110	1.00	39.88	C
ATOM	313	O	GLN	A	41	69.238	39.044	41.402	1.00	39.75	O
ATOM	314	CB	GLN	A	41	66.256	38.705	42.790	1.00	44.12	C
ATOM	315	CG	GLN	A	41	64.735	38.752	42.795	1.00	49.04	C
ATOM	316	CD	GLN	A	41	64.188	40.059	43.352	1.00	51.98	C
ATOM	317	OE1	GLN	A	41	64.464	40.433	44.501	1.00	54.77	O
ATOM	318	NE2	GLN	A	41	63.406	40.761	42.541	1.00	52.25	N
ATOM	319	N	LYS	A	42	68.798	40.353	43.179	1.00	39.91	N
ATOM	320	CA	LYS	A	42	70.178	40.423	43.627	1.00	41.35	C
ATOM	321	C	LYS	A	42	70.701	38.997	43.872	1.00	41.68	C
ATOM	322	O	LYS	A	42	69.993	38.157	44.428	1.00	40.20	O
ATOM	323	CB	LYS	A	42	70.236	41.226	44.921	1.00	42.49	C
ATOM	324	CG	LYS	A	42	71.606	41.323	45.551	1.00	45.67	C
ATOM	325	CD	LYS	A	42	71.501	42.014	46.902	1.00	47.42	C
ATOM	326	CE	LYS	A	42	72.844	42.067	47.605	1.00	48.87	C
ATOM	327	NZ	LYS	A	42	72.721	42.779	48.906	1.00	52.09	N
ATOM	328	N	GLY	A	43	71.929	38.728	43.442	1.00	41.55	N
ATOM	329	CA	GLY	A	43	72.511	37.412	43.644	1.00	40.73	C
ATOM	330	C	GLY	A	43	72.226	36.425	42.532	1.00	40.52	C
ATOM	331	O	GLY	A	43	72.807	35.341	42.496	1.00	40.95	O
ATOM	332	N	GLN	A	44	71.330	36.788	41.625	1.00	40.46	N
ATOM	333	CA	GLN	A	44	70.992	35.912	40.511	1.00	41.27	C
ATOM	334	C	GLN	A	44	71.591	36.440	39.211	1.00	41.60	C
ATOM	335	O	GLN	A	44	72.292	37.450	39.196	1.00	40.78	O
ATOM	336	CB	GLN	A	44	69.471	35.822	40.342	1.00	42.42	C
ATOM	337	CG	GLN	A	44	68.688	35.691	41.637	1.00	45.60	C

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ATOM	338	CD	GLN	A	44	67.186	35.582	41.402	1.00	47.33	C
ATOM	339	OE1	GLN	A	44	66.621	36.293	40.565	1.00	48.58	O
ATOM	340	NE2	GLN	A	44	66.533	34.703	42.149	1.00	46.68	N
ATOM	341	N	GLN	A	45	71.308	35.726	38.127	1.00	42.62	N
ATOM	342	CA	GLN	A	45	71.741	36.089	36.784	1.00	43.67	C
ATOM	343	C	GLN	A	45	70.443	36.216	35.999	1.00	41.83	C
ATOM	344	O	GLN	A	45	69.439	35.611	36.367	1.00	40.98	O
ATOM	345	CB	GLN	A	45	72.593	34.981	36.153	1.00	46.80	C
ATOM	346	CG	GLN	A	45	73.929	34.741	36.833	1.00	52.13	C
ATOM	347	CD	GLN	A	45	74.909	35.872	36.601	1.00	54.67	C
ATOM	348	OE1	GLN	A	45	75.420	36.047	35.489	1.00	57.71	O
ATOM	349	NE2	GLN	A	45	75.175	36.653	37.647	1.00	54.39	N
ATOM	350	N	SER	A	46	70.458	36.999	34.928	1.00	39.93	N
ATOM	351	CA	SER	A	46	69.268	37.162	34.110	1.00	38.73	C
ATOM	352	C	SER	A	46	69.005	35.868	33.347	1.00	39.01	C
ATOM	353	O	SER	A	46	69.942	35.211	32.906	1.00	39.13	O
ATOM	354	CB	SER	A	46	69.464	38.304	33.113	1.00	36.60	C
ATOM	355	OG	SER	A	46	68.330	38.437	32.280	1.00	35.88	O
ATOM	356	N	GLU	A	47	67.733	35.511	33.190	1.00	39.22	N
ATOM	357	CA	GLU	A	47	67.363	34.297	32.463	1.00	39.59	C
ATOM	358	C	GLU	A	47	67.762	34.400	31.000	1.00	38.86	C
ATOM	359	O	GLU	A	47	67.904	33.385	30.316	1.00	38.01	O
ATOM	360	CB	GLU	A	47	65.857	34.057	32.563	1.00	41.44	C
ATOM	361	CG	GLU	A	47	65.365	33.806	33.978	1.00	44.53	C
ATOM	362	CD	GLU	A	47	63.853	33.843	34.073	1.00	47.63	C
ATOM	363	OE1	GLU	A	47	63.197	32.987	33.436	1.00	49.95	O
ATOM	364	OE2	GLU	A	47	63.321	34.732	34.777	1.00	49.50	O
ATOM	365	N	ILE	A	48	67.920	35.631	30.514	1.00	37.02	N
ATOM	366	CA	ILE	A	48	68.318	35.856	29.126	1.00	35.30	C
ATOM	367	C	ILE	A	48	69.474	36.854	29.055	1.00	34.82	C
ATOM	368	O	ILE	A	48	69.372	37.982	29.538	1.00	34.21	O
ATOM	369	CB	ILE	A	48	67.144	36.400	28.273	1.00	35.95	C
ATOM	370	CG1	ILE	A	48	65.958	35.434	28.328	1.00	37.12	C
ATOM	371	CG2	ILE	A	48	67.595	36.583	26.836	1.00	34.56	C
ATOM	372	CD1	ILE	A	48	64.768	35.879	27.509	1.00	37.86	C
ATOM	373	N	ASN	A	49	70.579	36.426	28.462	1.00	34.10	N
ATOM	374	CA	ASN	A	49	71.739	37.285	28.323	1.00	34.92	C
ATOM	375	C	ASN	A	49	72.160	37.365	26.866	1.00	35.76	C
ATOM	376	O	ASN	A	49	72.383	36.341	26.218	1.00	36.32	O
ATOM	377	CB	ASN	A	49	72.903	36.752	29.169	1.00	35.35	C
ATOM	378	CG	ASN	A	49	72.634	36.856	30.660	1.00	37.43	C
ATOM	379	OD1	ASN	A	49	72.802	37.917	31.263	1.00	34.90	O
ATOM	380	ND2	ASN	A	49	72.193	35.755	31.258	1.00	36.59	N
ATOM	381	N	LEU	A	50	72.242	38.582	26.342	1.00	34.27	N
ATOM	382	CA	LEU	A	50	72.682	38.770	24.965	1.00	33.47	C
ATOM	383	C	LEU	A	50	74.184	38.504	24.991	1.00	33.03	C
ATOM	384	O	LEU	A	50	74.809	38.633	26.040	1.00	31.70	O
ATOM	385	CB	LEU	A	50	72.444	40.213	24.522	1.00	33.25	C
ATOM	386	CG	LEU	A	50	71.041	40.784	24.715	1.00	33.75	C
ATOM	387	CD1	LEU	A	50	71.050	42.270	24.362	1.00	33.97	C
ATOM	388	CD2	LEU	A	50	70.054	40.019	23.846	1.00	35.15	C
ATOM	389	N	LYS	A	51	74.766	38.132	23.855	1.00	33.34	N
ATOM	390	CA	LYS	A	51	76.208	37.902	23.815	1.00	33.66	C
ATOM	391	C	LYS	A	51	76.902	39.177	23.335	1.00	32.95	C
ATOM	392	O	LYS	A	51	78.109	39.359	23.532	1.00	32.77	O
ATOM	393	CB	LYS	A	51	76.531	36.680	22.946	1.00	34.82	C
ATOM	394	CG	LYS	A	51	75.984	35.408	23.593	1.00	37.49	C

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ATOM	395	CD	LYS	A	51	76.413	34.136	22.897	1.00	39.84	C
ATOM	396	CE	LYS	A	51	75.893	32.920	23.663	1.00	40.88	C
ATOM	397	NZ	LYS	A	51	76.295	31.643	22.997	1.00	43.33	N
ATOM	398	N	ILE	A	52	76.119	40.054	22.708	1.00	31.66	N
ATOM	399	CA	ILE	A	52	76.585	41.370	22.274	1.00	31.00	C
ATOM	400	C	ILE	A	52	75.425	42.297	22.651	1.00	31.49	C
ATOM	401	O	ILE	A	52	74.257	41.937	22.498	1.00	31.89	O
ATOM	402	CB	ILE	A	52	76.912	41.454	20.750	1.00	31.40	C
ATOM	403	CG1	ILE	A	52	75.685	41.121	19.892	1.00	31.59	C
ATOM	404	CG2	ILE	A	52	78.089	40.538	20.432	1.00	31.15	C
ATOM	405	CD1	ILE	A	52	75.900	41.415	18.400	1.00	29.50	C
ATOM	406	N	PRO	A	53	75.733	43.499	23.154	1.00	31.49	N
ATOM	407	CA	PRO	A	53	74.731	44.482	23.579	1.00	31.87	C
ATOM	408	C	PRO	A	53	73.958	45.252	22.506	1.00	32.48	C
ATOM	409	O	PRO	A	53	73.645	46.428	22.698	1.00	33.45	O
ATOM	410	CB	PRO	A	53	75.544	45.412	24.468	1.00	31.07	C
ATOM	411	CG	PRO	A	53	76.853	45.479	23.713	1.00	31.12	C
ATOM	412	CD	PRO	A	53	77.101	44.034	23.325	1.00	30.40	C
ATOM	413	N	LEU	A	54	73.630	44.602	21.395	1.00	31.62	N
ATOM	414	CA	LEU	A	54	72.901	45.279	20.331	1.00	30.89	C
ATOM	415	C	LEU	A	54	71.582	44.592	19.986	1.00	31.85	C
ATOM	416	O	LEU	A	54	71.524	43.365	19.872	1.00	32.82	O
ATOM	417	CB	LEU	A	54	73.767	45.347	19.069	1.00	29.66	C
ATOM	418	CG	LEU	A	54	75.192	45.900	19.182	1.00	30.68	C
ATOM	419	CD1	LEU	A	54	75.876	45.810	17.824	1.00	29.65	C
ATOM	420	CD2	LEU	A	54	75.162	47.347	19.678	1.00	30.19	C
ATOM	421	N	VAL	A	55	70.519	45.377	19.840	1.00	31.15	N
ATOM	422	CA	VAL	A	55	69.230	44.830	19.441	1.00	30.86	C
ATOM	423	C	VAL	A	55	68.692	45.737	18.333	1.00	32.57	C
ATOM	424	O	VAL	A	55	68.876	46.956	18.385	1.00	33.70	O
ATOM	425	CB	VAL	A	55	68.214	44.757	20.618	1.00	29.59	C
ATOM	426	CG1	VAL	A	55	68.833	44.009	21.786	1.00	28.25	C
ATOM	427	CG2	VAL	A	55	67.750	46.146	21.025	1.00	29.12	C
ATOM	428	N	SER	A	56	68.058	45.144	17.322	1.00	32.00	N
ATOM	429	CA	SER	A	56	67.511	45.914	16.207	1.00	31.93	C
ATOM	430	C	SER	A	56	66.134	46.469	16.556	1.00	31.63	C
ATOM	431	O	SER	A	56	65.324	45.812	17.214	1.00	31.90	O
ATOM	432	CB	SER	A	56	67.459	45.056	14.929	1.00	31.63	C
ATOM	433	OG	SER	A	56	66.668	43.895	15.102	1.00	31.84	O
ATOM	434	N	ALA	A	57	65.891	47.697	16.115	1.00	31.38	N
ATOM	435	CA	ALA	A	57	64.654	48.419	16.395	1.00	31.55	C
ATOM	436	C	ALA	A	57	63.361	47.756	15.907	1.00	32.70	C
ATOM	437	O	ALA	A	57	63.351	47.012	14.922	1.00	33.02	O
ATOM	438	CB	ALA	A	57	64.764	49.833	15.836	1.00	29.58	C
ATOM	439	N	ILE	A	58	62.277	48.047	16.620	1.00	32.44	N
ATOM	440	CA	ILE	A	58	60.950	47.511	16.328	1.00	33.86	C
ATOM	441	C	ILE	A	58	60.380	48.325	15.173	1.00	34.14	C
ATOM	442	O	ILE	A	58	59.463	49.129	15.359	1.00	34.72	O
ATOM	443	CB	ILE	A	58	60.032	47.654	17.578	1.00	32.65	C
ATOM	444	CG1	ILE	A	58	60.827	47.277	18.835	1.00	33.43	C
ATOM	445	CG2	ILE	A	58	58.800	46.759	17.444	1.00	30.11	C
ATOM	446	CD1	ILE	A	58	60.068	47.428	20.135	1.00	31.89	C
ATOM	447	N	MET	A	59	60.931	48.111	13.982	1.00	34.79	N
ATOM	448	CA	MET	A	59	60.523	48.870	12.803	1.00	35.21	C
ATOM	449	C	MET	A	59	60.363	48.024	11.545	1.00	36.00	C
ATOM	450	O	MET	A	59	61.151	47.107	11.287	1.00	34.61	O
ATOM	451	CB	MET	A	59	61.554	49.971	12.525	1.00	35.03	C

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ATOM	452	CG	MET	A	59	61.851	50.887	13.706	1.00	34.37	C
ATOM	453	SD	MET	A	59	63.181	52.051	13.323	1.00	35.17	S
ATOM	454	CE	MET	A	59	62.401	53.057	12.081	1.00	35.07	C
ATOM	455	N	GLN	A	60	59.353	48.366	10.748	1.00	37.49	N
ATOM	456	CA	GLN	A	60	59.063	47.649	9.509	1.00	39.05	C
ATOM	457	C	GLN	A	60	60.275	47.600	8.594	1.00	38.95	C
ATOM	458	O	GLN	A	60	60.506	46.603	7.915	1.00	39.70	O
ATOM	459	CB	GLN	A	60	57.927	48.329	8.738	1.00	39.93	C
ATOM	460	CG	GLN	A	60	56.671	48.629	9.532	1.00	41.07	C
ATOM	461	CD	GLN	A	60	55.609	49.290	8.665	1.00	42.66	C
ATOM	462	OE1	GLN	A	60	55.930	50.010	7.717	1.00	42.94	O
ATOM	463	NE2	GLN	A	60	54.342	49.058	8.992	1.00	42.62	N
ATOM	464	N	SER	A	61	61.046	48.683	8.578	1.00	39.09	N
ATOM	465	CA	SER	A	61	62.215	48.770	7.705	1.00	38.98	C
ATOM	466	C	SER	A	61	63.506	48.217	8.296	1.00	38.63	C
ATOM	467	O	SER	A	61	64.577	48.352	7.694	1.00	38.93	O
ATOM	468	CB	SER	A	61	62.436	50.228	7.280	1.00	39.27	C
ATOM	469	OG	SER	A	61	62.568	51.078	8.409	1.00	42.11	O
ATOM	470	N	VAL	A	62	63.407	47.578	9.457	1.00	37.45	N
ATOM	471	CA	VAL	A	62	64.593	47.048	10.112	1.00	36.30	C
ATOM	472	C	VAL	A	62	64.535	45.590	10.536	1.00	37.04	C
ATOM	473	O	VAL	A	62	65.304	44.765	10.050	1.00	38.38	O
ATOM	474	CB	VAL	A	62	64.939	47.869	11.382	1.00	36.10	C
ATOM	475	CG1	VAL	A	62	66.168	47.274	12.069	1.00	34.59	C
ATOM	476	CG2	VAL	A	62	65.175	49.330	11.016	1.00	35.17	C
ATOM	477	N	SER	A	63	63.621	45.275	11.444	1.00	37.88	N
ATOM	478	CA	SER	A	63	63.540	43.929	11.982	1.00	38.55	C
ATOM	479	C	SER	A	63	62.557	42.938	11.368	1.00	39.50	C
ATOM	480	O	SER	A	63	61.454	42.727	11.879	1.00	37.63	O
ATOM	481	CB	SER	A	63	63.319	44.013	13.495	1.00	38.61	C
ATOM	482	OG	SER	A	63	64.401	44.694	14.120	1.00	36.71	O
ATOM	483	N	GLY	A	64	62.991	42.329	10.268	1.00	39.83	N
ATOM	484	CA	GLY	A	64	62.201	41.317	9.597	1.00	41.35	C
ATOM	485	C	GLY	A	64	62.814	39.992	10.023	1.00	43.17	C
ATOM	486	O	GLY	A	64	63.710	39.973	10.874	1.00	39.88	O
ATOM	487	N	GLU	A	65	62.373	38.884	9.432	1.00	44.98	N
ATOM	488	CA	GLU	A	65	62.913	37.593	9.832	1.00	47.09	C
ATOM	489	C	GLU	A	65	64.384	37.401	9.484	1.00	45.97	C
ATOM	490	O	GLU	A	65	65.129	36.825	10.274	1.00	45.63	O
ATOM	491	CB	GLU	A	65	62.069	36.447	9.259	1.00	50.39	C
ATOM	492	CG	GLU	A	65	62.087	36.305	7.758	1.00	56.03	C
ATOM	493	CD	GLU	A	65	61.206	35.158	7.297	1.00	60.65	C
ATOM	494	OE1	GLU	A	65	59.968	35.256	7.478	1.00	62.24	O
ATOM	495	OE2	GLU	A	65	61.752	34.158	6.768	1.00	61.62	O
ATOM	496	N	LYS	A	66	64.814	37.885	8.322	1.00	45.39	N
ATOM	497	CA	LYS	A	66	66.216	37.740	7.941	1.00	45.57	C
ATOM	498	C	LYS	A	66	67.118	38.490	8.917	1.00	43.76	C
ATOM	499	O	LYS	A	66	68.197	38.014	9.275	1.00	43.26	O
ATOM	500	CB	LYS	A	66	66.452	38.255	6.518	1.00	48.10	C
ATOM	501	CG	LYS	A	66	66.051	37.272	5.426	1.00	53.08	C
ATOM	502	CD	LYS	A	66	66.353	37.827	4.032	1.00	56.63	C
ATOM	503	CE	LYS	A	66	65.933	36.847	2.937	1.00	58.88	C
ATOM	504	NZ	LYS	A	66	66.138	37.403	1.561	1.00	59.62	N
ATOM	505	N	MET	A	67	66.671	39.665	9.347	1.00	41.61	N
ATOM	506	CA	MET	A	67	67.440	40.468	10.290	1.00	40.17	C
ATOM	507	C	MET	A	67	67.552	39.730	11.625	1.00	39.71	C
ATOM	508	O	MET	A	67	68.638	39.619	12.199	1.00	38.59	O

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ATOM	509	CB	MET	A	67	66.761	41.822	10.507	1.00	39.65	C
ATOM	510	CG	MET	A	67	67.451	42.722	11.525	1.00	38.90	C
ATOM	511	SD	MET	A	67	69.110	43.219	11.014	1.00	38.59	S
ATOM	512	CE	MET	A	67	68.730	44.370	9.680	1.00	37.11	C
ATOM	513	N	ALA	A	68	66.422	39.217	12.102	1.00	38.12	N
ATOM	514	CA	ALA	A	68	66.370	38.505	13.371	1.00	38.12	C
ATOM	515	C	ALA	A	68	67.314	37.306	13.407	1.00	38.48	C
ATOM	516	O	ALA	A	68	67.919	37.009	14.437	1.00	38.33	O
ATOM	517	CB	ALA	A	68	64.947	38.064	13.652	1.00	37.40	C
ATOM	518	N	ILE	A	69	67.435	36.622	12.275	1.00	38.50	N
ATOM	519	CA	ILE	A	69	68.308	35.461	12.163	1.00	38.32	C
ATOM	520	C	ILE	A	69	69.774	35.896	12.129	1.00	37.75	C
ATOM	521	O	ILE	A	69	70.601	35.383	12.883	1.00	38.40	O
ATOM	522	CB	ILE	A	69	67.981	34.656	10.874	1.00	40.02	C
ATOM	523	CG1	ILE	A	69	66.603	33.998	11.006	1.00	40.60	C
ATOM	524	CG2	ILE	A	69	69.042	33.599	10.625	1.00	38.98	C
ATOM	525	CD1	ILE	A	69	66.013	33.545	9.678	1.00	41.31	C
ATOM	526	N	ALA	A	70	70.084	36.847	11.254	1.00	37.08	N
ATOM	527	CA	ALA	A	70	71.442	37.348	11.109	1.00	36.18	C
ATOM	528	C	ALA	A	70	72.000	37.959	12.392	1.00	36.22	C
ATOM	529	O	ALA	A	70	73.182	37.796	12.695	1.00	36.51	O
ATOM	530	CB	ALA	A	70	71.499	38.366	9.987	1.00	36.62	C
ATOM	531	N	LEU	A	71	71.155	38.661	13.142	1.00	35.64	N
ATOM	532	CA	LEU	A	71	71.593	39.293	14.381	1.00	35.41	C
ATOM	533	C	LEU	A	71	71.752	38.281	15.511	1.00	35.81	C
ATOM	534	O	LEU	A	71	72.707	38.353	16.282	1.00	34.47	O
ATOM	535	CB	LEU	A	71	70.617	40.400	14.792	1.00	33.24	C
ATOM	536	CG	LEU	A	71	70.921	41.215	16.061	1.00	33.66	C
ATOM	537	CD1	LEU	A	71	72.391	41.629	16.110	1.00	31.27	C
ATOM	538	CD2	LEU	A	71	70.021	42.451	16.083	1.00	31.14	C
ATOM	539	N	ALA	A	72	70.822	37.337	15.608	1.00	37.05	N
ATOM	540	CA	ALA	A	72	70.906	36.317	16.648	1.00	38.69	C
ATOM	541	C	ALA	A	72	72.166	35.476	16.445	1.00	40.01	C
ATOM	542	O	ALA	A	72	72.756	34.988	17.411	1.00	39.86	O
ATOM	543	CB	ALA	A	72	69.665	35.422	16.620	1.00	37.80	C
ATOM	544	N	ARG	A	73	72.570	35.304	15.188	1.00	40.95	N
ATOM	545	CA	ARG	A	73	73.761	34.525	14.874	1.00	43.10	C
ATOM	546	C	ARG	A	73	75.004	35.169	15.464	1.00	43.29	C
ATOM	547	O	ARG	A	73	75.963	34.477	15.807	1.00	42.95	O
ATOM	548	CB	ARG	A	73	73.940	34.384	13.359	1.00	45.58	C
ATOM	549	CG	ARG	A	73	73.014	33.367	12.707	1.00	49.18	C
ATOM	550	CD	ARG	A	73	73.285	33.246	11.210	1.00	52.08	C
ATOM	551	NE	ARG	A	73	72.430	32.238	10.591	1.00	55.80	N
ATOM	552	CZ	ARG	A	73	72.264	32.093	9.278	1.00	58.09	C
ATOM	553	NH1	ARG	A	73	72.897	32.895	8.427	1.00	58.20	N
ATOM	554	NH2	ARG	A	73	71.460	31.144	8.813	1.00	58.98	N
ATOM	555	N	GLU	A	74	74.976	36.495	15.585	1.00	42.49	N
ATOM	556	CA	GLU	A	74	76.103	37.239	16.129	1.00	41.53	C
ATOM	557	C	GLU	A	74	75.987	37.478	17.631	1.00	39.63	C
ATOM	558	O	GLU	A	74	76.896	38.031	18.242	1.00	40.05	O
ATOM	559	CB	GLU	A	74	76.255	38.577	15.401	1.00	42.87	C
ATOM	560	CG	GLU	A	74	76.467	38.458	13.892	1.00	45.91	C
ATOM	561	CD	GLU	A	74	77.673	37.595	13.522	1.00	49.55	C
ATOM	562	OE1	GLU	A	74	78.768	37.813	14.094	1.00	50.07	O
ATOM	563	OE2	GLU	A	74	77.524	36.704	12.653	1.00	50.61	O
ATOM	564	N	GLY	A	75	74.869	37.074	18.229	1.00	38.37	N
ATOM	565	CA	GLY	A	75	74.716	37.250	19.664	1.00	38.10	C

ATOM	566	C	GLY	A	75	73.715	38.287	20.132	1.00	38.30	C
ATOM	567	O	GLY	A	75	73.517	38.458	21.337	1.00	39.24	O
ATOM	568	N	GLY	A	76	73.092	38.987	19.192	1.00	37.09	N
ATOM	569	CA	GLY	A	76	72.107	39.990	19.549	1.00	36.51	C
ATOM	570	C	GLY	A	76	70.708	39.449	19.312	1.00	36.82	C
ATOM	571	O	GLY	A	76	70.546	38.266	18.989	1.00	36.23	O
ATOM	572	N	ILE	A	77	69.698	40.298	19.477	1.00	35.24	N
ATOM	573	CA	ILE	A	77	68.316	39.875	19.259	1.00	34.74	C
ATOM	574	C	ILE	A	77	67.536	40.962	18.518	1.00	35.14	C
ATOM	575	O	ILE	A	77	67.837	42.159	18.634	1.00	34.83	O
ATOM	576	CB	ILE	A	77	67.609	39.552	20.602	1.00	33.95	C
ATOM	577	CG1	ILE	A	77	66.389	38.655	20.350	1.00	34.82	C
ATOM	578	CG2	ILE	A	77	67.179	40.850	21.305	1.00	33.35	C
ATOM	579	CD1	ILE	A	77	65.636	38.255	21.619	1.00	31.17	C
ATOM	580	N	SER	A	78	66.543	40.539	17.744	1.00	34.83	N
ATOM	581	CA	SER	A	78	65.711	41.467	16.993	1.00	33.97	C
ATOM	582	C	SER	A	78	64.300	41.484	17.547	1.00	34.42	C
ATOM	583	O	SER	A	78	63.817	40.484	18.074	1.00	35.04	O
ATOM	584	CB	SER	A	78	65.645	41.068	15.513	1.00	32.74	C
ATOM	585	OG	SER	A	78	66.870	41.295	14.848	1.00	30.88	O
ATOM	586	N	PHE	A	79	63.641	42.629	17.439	1.00	34.58	N
ATOM	587	CA	PHE	A	79	62.270	42.740	17.891	1.00	35.16	C
ATOM	588	C	PHE	A	79	61.405	42.906	16.646	1.00	35.89	C
ATOM	589	O	PHE	A	79	61.253	44.011	16.126	1.00	36.16	O
ATOM	590	CB	PHE	A	79	62.094	43.929	18.846	1.00	33.75	C
ATOM	591	CG	PHE	A	79	62.664	43.688	20.219	1.00	34.30	C
ATOM	592	CD1	PHE	A	79	64.016	43.911	20.481	1.00	35.61	C
ATOM	593	CD2	PHE	A	79	61.862	43.182	21.238	1.00	33.96	C
ATOM	594	CE1	PHE	A	79	64.559	43.626	21.745	1.00	35.47	C
ATOM	595	CE2	PHE	A	79	62.395	42.893	22.503	1.00	33.04	C
ATOM	596	CZ	PHE	A	79	63.741	43.115	22.755	1.00	33.81	C
ATOM	597	N	ILE	A	80	60.869	41.790	16.158	1.00	35.40	N
ATOM	598	CA	ILE	A	80	60.011	41.791	14.977	1.00	35.16	C
ATOM	599	C	ILE	A	80	58.951	42.878	15.136	1.00	35.68	C
ATOM	600	O	ILE	A	80	58.241	42.916	16.149	1.00	35.60	O
ATOM	601	CB	ILE	A	80	59.317	40.417	14.802	1.00	35.87	C
ATOM	602	CG1	ILE	A	80	60.373	39.319	14.621	1.00	35.71	C
ATOM	603	CG2	ILE	A	80	58.381	40.446	13.592	1.00	35.14	C
ATOM	604	CD1	ILE	A	80	61.235	39.494	13.386	1.00	34.65	C
ATOM	605	N	PHE	A	81	58.838	43.754	14.140	1.00	35.48	N
ATOM	606	CA	PHE	A	81	57.879	44.848	14.221	1.00	37.39	C
ATOM	607	C	PHE	A	81	56.427	44.423	14.437	1.00	37.98	C
ATOM	608	O	PHE	A	81	55.953	43.440	13.863	1.00	38.21	O
ATOM	609	CB	PHE	A	81	57.989	45.773	12.990	1.00	38.37	C
ATOM	610	CG	PHE	A	81	57.733	45.093	11.666	1.00	39.29	C
ATOM	611	CD1	PHE	A	81	58.693	44.272	11.089	1.00	39.25	C
ATOM	612	CD2	PHE	A	81	56.543	45.315	10.978	1.00	39.78	C
ATOM	613	CE1	PHE	A	81	58.476	43.681	9.838	1.00	39.50	C
ATOM	614	CE2	PHE	A	81	56.313	44.731	9.729	1.00	40.29	C
ATOM	615	CZ	PHE	A	81	57.284	43.911	9.158	1.00	39.87	C
ATOM	616	N	GLY	A	82	55.730	45.178	15.281	1.00	38.14	N
ATOM	617	CA	GLY	A	82	54.341	44.878	15.570	1.00	39.76	C
ATOM	618	C	GLY	A	82	53.374	45.678	14.720	1.00	40.57	C
ATOM	619	O	GLY	A	82	52.158	45.550	14.869	1.00	41.33	O
ATOM	620	N	SER	A	83	53.909	46.504	13.826	1.00	40.23	N
ATOM	621	CA	SER	A	83	53.076	47.313	12.945	1.00	41.14	C
ATOM	622	C	SER	A	83	52.678	46.522	11.698	1.00	41.79	C

ATOM	623	O	SER	A	83	52.958	46.920	10.566	1.00	40.82	O
ATOM	624	CB	SER	A	83	53.816	48.590	12.549	1.00	40.01	C
ATOM	625	OG	SER	A	83	55.077	48.281	11.989	1.00	42.73	O
ATOM	626	N	GLN	A	84	52.034	45.385	11.934	1.00	42.84	N
ATOM	627	CA	GLN	A	84	51.552	44.502	10.879	1.00	43.52	C
ATOM	628	C	GLN	A	84	50.500	43.599	11.524	1.00	44.66	C
ATOM	629	O	GLN	A	84	50.323	43.632	12.742	1.00	44.23	O
ATOM	630	CB	GLN	A	84	52.699	43.665	10.310	1.00	43.55	C
ATOM	631	CG	GLN	A	84	53.361	42.741	11.318	1.00	43.62	C
ATOM	632	CD	GLN	A	84	54.467	41.917	10.694	1.00	45.55	C
ATOM	633	OE1	GLN	A	84	54.266	41.275	9.662	1.00	46.16	O
ATOM	634	NE2	GLN	A	84	55.646	41.926	11.319	1.00	44.86	N
ATOM	635	N	SER	A	85	49.807	42.798	10.720	1.00	46.26	N
ATOM	636	CA	SER	A	85	48.774	41.912	11.249	1.00	47.95	C
ATOM	637	C	SER	A	85	49.364	40.964	12.283	1.00	48.90	C
ATOM	638	O	SER	A	85	50.554	40.648	12.239	1.00	48.83	O
ATOM	639	CB	SER	A	85	48.135	41.087	10.128	1.00	47.83	C
ATOM	640	OG	SER	A	85	48.937	39.965	9.804	1.00	48.77	O
ATOM	641	N	ILE	A	86	48.520	40.517	13.209	1.00	49.03	N
ATOM	642	CA	ILE	A	86	48.934	39.593	14.256	1.00	50.14	C
ATOM	643	C	ILE	A	86	49.416	38.281	13.636	1.00	51.13	C
ATOM	644	O	ILE	A	86	50.425	37.715	14.059	1.00	50.51	O
ATOM	645	CB	ILE	A	86	47.764	39.305	15.222	1.00	49.46	C
ATOM	646	CG1	ILE	A	86	47.346	40.605	15.919	1.00	49.50	C
ATOM	647	CG2	ILE	A	86	48.162	38.236	16.227	1.00	48.57	C
ATOM	648	CD1	ILE	A	86	46.160	40.463	16.864	1.00	49.15	C
ATOM	649	N	GLU	A	87	48.689	37.811	12.626	1.00	52.14	N
ATOM	650	CA	GLU	A	87	49.028	36.573	11.930	1.00	53.33	C
ATOM	651	C	GLU	A	87	50.377	36.714	11.227	1.00	52.06	C
ATOM	652	O	GLU	A	87	51.197	35.795	11.228	1.00	51.76	O
ATOM	653	CB	GLU	A	87	47.956	36.237	10.881	1.00	55.49	C
ATOM	654	CG	GLU	A	87	46.545	35.978	11.430	1.00	59.83	C
ATOM	655	CD	GLU	A	87	45.948	37.179	12.164	1.00	62.66	C
ATOM	656	OE1	GLU	A	87	45.934	38.298	11.594	1.00	63.16	O
ATOM	657	OE2	GLU	A	87	45.484	36.998	13.314	1.00	64.49	O
ATOM	658	N	SER	A	88	50.594	37.876	10.623	1.00	51.42	N
ATOM	659	CA	SER	A	88	51.828	38.149	9.895	1.00	51.37	C
ATOM	660	C	SER	A	88	53.048	38.223	10.818	1.00	49.76	C
ATOM	661	O	SER	A	88	54.098	37.651	10.522	1.00	48.93	O
ATOM	662	CB	SER	A	88	51.683	39.459	9.116	1.00	52.05	C
ATOM	663	OG	SER	A	88	52.784	39.661	8.253	1.00	54.78	O
ATOM	664	N	GLN	A	89	52.909	38.927	11.935	1.00	48.17	N
ATOM	665	CA	GLN	A	89	54.010	39.051	12.878	1.00	47.23	C
ATOM	666	C	GLN	A	89	54.338	37.692	13.493	1.00	47.15	C
ATOM	667	O	GLN	A	89	55.507	37.333	13.636	1.00	47.13	O
ATOM	668	CB	GLN	A	89	53.663	40.060	13.980	1.00	45.26	C
ATOM	669	CG	GLN	A	89	54.718	40.149	15.081	1.00	43.42	C
ATOM	670	CD	GLN	A	89	54.405	41.207	16.127	1.00	42.17	C
ATOM	671	OE1	GLN	A	89	53.243	41.438	16.470	1.00	40.51	O
ATOM	672	NE2	GLN	A	89	55.447	41.840	16.658	1.00	40.16	N
ATOM	673	N	ALA	A	90	53.305	36.934	13.848	1.00	47.23	N
ATOM	674	CA	ALA	A	90	53.498	35.616	14.445	1.00	47.19	C
ATOM	675	C	ALA	A	90	54.224	34.678	13.486	1.00	47.12	C
ATOM	676	O	ALA	A	90	55.065	33.881	13.903	1.00	48.12	O
ATOM	677	CB	ALA	A	90	52.154	35.022	14.848	1.00	47.65	C
ATOM	678	N	ALA	A	91	53.909	34.774	12.199	1.00	46.68	N
ATOM	679	CA	ALA	A	91	54.560	33.924	11.211	1.00	47.00	C



TABLE 6

ATOM	680	C	ALA	A	91	56.064	34.212	11.175	1.00	47.22	C
ATOM	681	O	ALA	A	91	56.877	33.291	11.081	1.00	47.71	O
ATOM	682	CB	ALA	A	91	53.940	34.142	9.828	1.00	46.18	C
ATOM	683	N	MET	A	92	56.439	35.486	11.249	1.00	47.06	N
ATOM	684	CA	MET	A	92	57.856	35.840	11.237	1.00	46.89	C
ATOM	685	C	MET	A	92	58.568	35.257	12.451	1.00	46.53	C
ATOM	686	O	MET	A	92	59.684	34.753	12.340	1.00	47.29	O
ATOM	687	CB	MET	A	92	58.041	37.357	11.222	1.00	46.77	C
ATOM	688	CG	MET	A	92	57.871	37.987	9.863	1.00	46.28	C
ATOM	689	SD	MET	A	92	58.254	39.733	9.915	1.00	45.24	S
ATOM	690	CE	MET	A	92	56.986	40.381	8.852	1.00	46.35	C
ATOM	691	N	VAL	A	93	57.925	35.333	13.611	1.00	46.27	N
ATOM	692	CA	VAL	A	93	58.511	34.796	14.829	1.00	46.01	C
ATOM	693	C	VAL	A	93	58.675	33.290	14.682	1.00	47.76	C
ATOM	694	O	VAL	A	93	59.715	32.733	15.037	1.00	48.37	O
ATOM	695	CB	VAL	A	93	57.624	35.090	16.057	1.00	44.88	C
ATOM	696	CG1	VAL	A	93	58.080	34.254	17.251	1.00	43.31	C
ATOM	697	CG2	VAL	A	93	57.692	36.568	16.394	1.00	43.70	C
ATOM	698	N	HIS	A	94	57.642	32.637	14.153	1.00	49.11	N
ATOM	699	CA	HIS	A	94	57.668	31.189	13.955	1.00	49.55	C
ATOM	700	C	HIS	A	94	58.818	30.791	13.035	1.00	48.88	C
ATOM	701	O	HIS	A	94	59.572	29.862	13.330	1.00	49.22	O
ATOM	702	CB	HIS	A	94	56.344	30.703	13.349	1.00	51.41	C
ATOM	703	CG	HIS	A	94	56.256	29.213	13.221	1.00	53.19	C
ATOM	704	ND1	HIS	A	94	55.924	28.394	14.278	1.00	53.72	N
ATOM	705	CD2	HIS	A	94	56.520	28.391	12.176	1.00	54.01	C
ATOM	706	CE1	HIS	A	94	55.989	27.131	13.893	1.00	53.86	C
ATOM	707	NE2	HIS	A	94	56.351	27.102	12.622	1.00	54.56	N
ATOM	708	N	ALA	A	95	58.952	31.502	11.921	1.00	48.06	N
ATOM	709	CA	ALA	A	95	60.006	31.219	10.956	1.00	47.57	C
ATOM	710	C	ALA	A	95	61.405	31.321	11.567	1.00	48.34	C
ATOM	711	O	ALA	A	95	62.294	30.538	11.233	1.00	48.18	O
ATOM	712	CB	ALA	A	95	59.887	32.162	9.770	1.00	46.85	C
ATOM	713	N	VAL	A	96	61.604	32.289	12.458	1.00	48.08	N
ATOM	714	CA	VAL	A	96	62.906	32.463	13.087	1.00	47.54	C
ATOM	715	C	VAL	A	96	63.165	31.344	14.086	1.00	48.02	C
ATOM	716	O	VAL	A	96	64.276	30.815	14.164	1.00	47.17	O
ATOM	717	CB	VAL	A	96	63.003	33.826	13.815	1.00	47.26	C
ATOM	718	CG1	VAL	A	96	64.336	33.945	14.537	1.00	46.34	C
ATOM	719	CG2	VAL	A	96	62.856	34.952	12.813	1.00	47.02	C
ATOM	720	N	LYS	A	97	62.133	30.979	14.840	1.00	48.62	N
ATOM	721	CA	LYS	A	97	62.252	29.924	15.837	1.00	50.60	C
ATOM	722	C	LYS	A	97	62.459	28.546	15.209	1.00	52.32	C
ATOM	723	O	LYS	A	97	63.068	27.670	15.823	1.00	52.87	O
ATOM	724	CB	LYS	A	97	61.010	29.899	16.742	1.00	49.44	C
ATOM	725	CG	LYS	A	97	60.791	31.169	17.564	1.00	47.42	C
ATOM	726	CD	LYS	A	97	61.988	31.489	18.467	1.00	45.88	C
ATOM	727	CE	LYS	A	97	62.191	30.440	19.557	1.00	44.36	C
ATOM	728	NZ	LYS	A	97	63.433	30.692	20.354	1.00	42.11	N
ATOM	729	N	ASN	A	98	61.962	28.354	13.991	1.00	54.75	N
ATOM	730	CA	ASN	A	98	62.108	27.066	13.315	1.00	58.07	C
ATOM	731	C	ASN	A	98	63.004	27.120	12.085	1.00	59.49	C
ATOM	732	O	ASN	A	98	62.799	26.361	11.138	1.00	60.40	O
ATOM	733	CB	ASN	A	98	60.738	26.515	12.899	1.00	58.95	C
ATOM	734	CG	ASN	A	98	59.882	26.119	14.082	1.00	61.39	C
ATOM	735	OD1	ASN	A	98	59.420	26.970	14.845	1.00	62.44	O
ATOM	736	ND2	ASN	A	98	59.668	24.816	14.248	1.00	62.55	N

TABLE 6

ATOM	737	N	PHE	A	99	64.000	27.999	12.092	1.00	61.00	N
ATOM	738	CA	PHE	A	99	64.889	28.117	10.942	1.00	62.73	C
ATOM	739	C	PHE	A	99	65.827	26.926	10.774	1.00	64.62	C
ATOM	740	O	PHE	A	99	66.150	26.544	9.650	1.00	64.73	O
ATOM	741	CB	PHE	A	99	65.719	29.398	11.028	1.00	61.76	C
ATOM	742	CG	PHE	A	99	66.492	29.703	9.772	1.00	61.06	C
ATOM	743	CD1	PHE	A	99	65.827	29.971	8.579	1.00	60.96	C
ATOM	744	CD2	PHE	A	99	67.881	29.727	9.780	1.00	60.81	C
ATOM	745	CE1	PHE	A	99	66.537	30.258	7.412	1.00	60.52	C
ATOM	746	CE2	PHE	A	99	68.599	30.012	8.620	1.00	60.86	C
ATOM	747	CZ	PHE	A	99	67.924	30.279	7.434	1.00	60.69	C
ATOM	748	N	LYS	A	100	66.267	26.340	11.883	1.00	67.08	N
ATOM	749	CA	LYS	A	100	67.178	25.199	11.820	1.00	70.33	C
ATOM	750	C	LYS	A	100	66.462	23.871	11.582	1.00	72.95	C
ATOM	751	O	LYS	A	100	66.988	22.809	11.914	1.00	72.97	O
ATOM	752	CB	LYS	A	100	68.006	25.108	13.104	1.00	69.54	C
ATOM	753	CG	LYS	A	100	68.932	26.288	13.333	1.00	68.73	C
ATOM	754	CD	LYS	A	100	69.765	26.088	14.586	1.00	68.36	C
ATOM	755	CE	LYS	A	100	70.750	27.227	14.791	1.00	67.27	C
ATOM	756	NZ	LYS	A	100	71.581	27.006	16.000	1.00	66.23	N
ATOM	757	N	ALA	A	101	65.269	23.937	10.999	1.00	76.17	N
ATOM	758	CA	ALA	A	101	64.486	22.739	10.717	1.00	79.28	C
ATOM	759	C	ALA	A	101	64.671	22.262	9.275	1.00	81.72	C
ATOM	760	O	ALA	A	101	65.159	21.154	9.043	1.00	81.99	O
ATOM	761	CB	ALA	A	101	63.011	23.002	10.996	1.00	79.19	C
ATOM	762	N	GLY	A	102	64.280	23.092	8.310	1.00	84.33	N
ATOM	763	CA	GLY	A	102	64.420	22.707	6.915	1.00	87.56	C
ATOM	764	C	GLY	A	102	63.773	23.645	5.910	1.00	89.81	C
ATOM	765	O	GLY	A	102	62.728	24.243	6.179	1.00	90.05	O
ATOM	766	N	PHE	A	103	64.402	23.760	4.741	1.00	91.88	N
ATOM	767	CA	PHE	A	103	63.930	24.618	3.653	1.00	93.97	C
ATOM	768	C	PHE	A	103	62.785	23.976	2.864	1.00	95.19	C
ATOM	769	O	PHE	A	103	61.854	24.661	2.427	1.00	95.10	O
ATOM	770	CB	PHE	A	103	65.107	24.933	2.714	1.00	94.40	C
ATOM	771	CG	PHE	A	103	64.716	25.637	1.439	1.00	95.36	C
ATOM	772	CD1	PHE	A	103	64.030	24.961	0.430	1.00	95.96	C
ATOM	773	CD2	PHE	A	103	65.052	26.973	1.238	1.00	95.68	C
ATOM	774	CE1	PHE	A	103	63.682	25.603	-0.758	1.00	96.63	C
ATOM	775	CE2	PHE	A	103	64.710	27.627	0.054	1.00	96.41	C
ATOM	776	CZ	PHE	A	103	64.024	26.940	-0.947	1.00	96.90	C
ATOM	777	N	VAL	A	104	62.867	22.660	2.685	1.00	96.51	N
ATOM	778	CA	VAL	A	104	61.864	21.904	1.941	1.00	97.40	C
ATOM	779	C	VAL	A	104	60.668	21.484	2.796	1.00	98.06	C
ATOM	780	O	VAL	A	104	60.475	21.986	3.905	1.00	98.29	O
ATOM	781	CB	VAL	A	104	62.494	20.639	1.318	1.00	97.53	C
ATOM	782	CG1	VAL	A	104	63.604	21.035	0.358	1.00	97.83	C
ATOM	783	CG2	VAL	A	104	63.043	19.733	2.415	1.00	97.17	C
ATOM	784	N	VAL	A	105	59.869	20.562	2.265	1.00	98.68	N
ATOM	785	CA	VAL	A	105	58.690	20.055	2.960	1.00	99.19	C
ATOM	786	C	VAL	A	105	58.840	18.556	3.223	1.00	99.69	C
ATOM	787	O	VAL	A	105	59.955	18.034	3.251	1.00	99.86	O
ATOM	788	CB	VAL	A	105	57.408	20.294	2.130	1.00	99.21	C
ATOM	789	CG1	VAL	A	105	57.207	21.786	1.904	1.00	98.66	C
ATOM	790	CG2	VAL	A	105	57.505	19.562	0.798	1.00	99.13	C
ATOM	791	N	SER	A	106	57.720	17.864	3.411	1.00	100.19	N
ATOM	792	CA	SER	A	106	57.748	16.427	3.674	1.00	100.80	C
ATOM	793	C	SER	A	106	57.538	15.604	2.401	1.00	101.31	C

TABLE 6

ATOM	794	O	SER A 106	56.616	14.788	2.323	1.00101.42	O
ATOM	795	CB	SER A 106	56.678	16.063	4.707	1.00100.69	C
ATOM	796	OG	SER A 106	55.384	16.412	4.245	1.00100.34	O
ATOM	797	N	ASP A 107	58.402	15.816	1.412	1.00101.66	N
ATOM	798	CA	ASP A 107	58.312	15.101	0.142	1.00101.66	C
ATOM	799	C	ASP A 107	59.084	13.785	0.184	1.00101.55	C
ATOM	800	O	ASP A 107	59.050	13.003	-0.767	1.00101.37	O
ATOM	801	CB	ASP A 107	58.848	15.976	-0.997	1.00101.95	C
ATOM	802	CG	ASP A 107	60.326	16.302	-0.843	1.00102.22	C
ATOM	803	OD1	ASP A 107	60.742	16.916	0.140	1.00102.16	O
ATOM	804	OD2	ASP A 107	61.126	15.891	-1.821	1.00102.12	O
ATOM	805	N	VAL A 220	77.129	27.310	12.363	1.00 82.99	N
ATOM	806	CA	VAL A 220	78.036	26.953	13.450	1.00 82.93	C
ATOM	807	C	VAL A 220	78.735	28.199	13.998	1.00 82.11	C
ATOM	808	O	VAL A 220	79.965	28.283	14.018	1.00 82.35	O
ATOM	809	CB	VAL A 220	79.103	25.942	12.967	1.00 83.59	C
ATOM	810	CG1	VAL A 220	79.931	25.443	14.152	1.00 83.61	C
ATOM	811	CG2	VAL A 220	78.424	24.777	12.252	1.00 84.13	C
ATOM	812	N	CYS A 221	77.936	29.165	14.439	1.00 80.94	N
ATOM	813	CA	CYS A 221	78.454	30.414	14.989	1.00 79.61	C
ATOM	814	C	CYS A 221	78.548	30.290	16.509	1.00 78.38	C
ATOM	815	O	CYS A 221	77.557	29.996	17.176	1.00 78.27	O
ATOM	816	CB	CYS A 221	77.526	31.568	14.602	1.00 80.09	C
ATOM	817	SG	CYS A 221	77.159	31.648	12.823	1.00 80.23	S
ATOM	818	N	HIS A 222	79.739	30.518	17.054	1.00 76.79	N
ATOM	819	CA	HIS A 222	79.949	30.395	18.493	1.00 74.99	C
ATOM	820	C	HIS A 222	79.364	31.496	19.366	1.00 72.24	C
ATOM	821	O	HIS A 222	79.359	31.376	20.592	1.00 72.13	O
ATOM	822	CB	HIS A 222	81.442	30.238	18.799	1.00 77.56	C
ATOM	823	CG	HIS A 222	81.952	28.846	18.586	1.00 80.75	C
ATOM	824	ND1	HIS A 222	81.352	27.741	19.155	1.00 81.58	N
ATOM	825	CD2	HIS A 222	83.003	28.377	17.872	1.00 81.49	C
ATOM	826	CE1	HIS A 222	82.011	26.653	18.799	1.00 82.43	C
ATOM	827	NE2	HIS A 222	83.017	27.011	18.021	1.00 82.72	N
ATOM	828	N	ASN A 223	78.875	32.565	18.751	1.00 68.37	N
ATOM	829	CA	ASN A 223	78.282	33.643	19.526	1.00 64.96	C
ATOM	830	C	ASN A 223	76.793	33.775	19.261	1.00 61.91	C
ATOM	831	O	ASN A 223	76.185	34.788	19.599	1.00 60.48	O
ATOM	832	CB	ASN A 223	78.984	34.968	19.237	1.00 65.81	C
ATOM	833	CG	ASN A 223	80.285	35.107	19.998	1.00 66.63	C
ATOM	834	OD1	ASN A 223	80.302	35.069	21.229	1.00 65.69	O
ATOM	835	ND2	ASN A 223	81.385	35.266	19.270	1.00 67.36	N
ATOM	836	N	GLU A 224	76.206	32.746	18.660	1.00 58.19	N
ATOM	837	CA	GLU A 224	74.780	32.774	18.371	1.00 55.64	C
ATOM	838	C	GLU A 224	73.972	32.796	19.657	1.00 51.83	C
ATOM	839	O	GLU A 224	74.341	32.166	20.646	1.00 50.93	O
ATOM	840	CB	GLU A 224	74.367	31.560	17.534	1.00 56.74	C
ATOM	841	CG	GLU A 224	74.747	30.220	18.136	1.00 59.42	C
ATOM	842	CD	GLU A 224	74.114	29.053	17.398	1.00 60.69	C
ATOM	843	OE1	GLU A 224	74.019	29.115	16.149	1.00 61.36	O
ATOM	844	OE2	GLU A 224	73.722	28.073	18.069	1.00 60.59	O
ATOM	845	N	LEU A 225	72.871	33.536	19.634	1.00 48.65	N
ATOM	846	CA	LEU A 225	71.991	33.641	20.785	1.00 46.12	C
ATOM	847	C	LEU A 225	70.843	32.660	20.571	1.00 44.98	C
ATOM	848	O	LEU A 225	70.031	32.832	19.660	1.00 42.50	O
ATOM	849	CB	LEU A 225	71.456	35.071	20.904	1.00 45.35	C
ATOM	850	CG	LEU A 225	70.635	35.402	22.151	1.00 46.02	C

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ATOM	851	CD1	LEU	A	225	71.483	35.146	23.389	1.00	46.56	C
ATOM	852	CD2	LEU	A	225	70.174	36.851	22.107	1.00	45.65	C
ATOM	853	N	VAL	A	226	70.778	31.634	21.415	1.00	45.11	N
ATOM	854	CA	VAL	A	226	69.740	30.612	21.293	1.00	45.18	C
ATOM	855	C	VAL	A	226	69.138	30.162	22.623	1.00	46.10	C
ATOM	856	O	VAL	A	226	69.664	30.461	23.698	1.00	46.22	O
ATOM	857	CB	VAL	A	226	70.294	29.355	20.598	1.00	44.37	C
ATOM	858	CG1	VAL	A	226	70.698	29.674	19.170	1.00	42.78	C
ATOM	859	CG2	VAL	A	226	71.478	28.826	21.383	1.00	43.24	C
ATOM	860	N	ASP	A	227	68.026	29.435	22.535	1.00	46.56	N
ATOM	861	CA	ASP	A	227	67.366	28.912	23.721	1.00	47.21	C
ATOM	862	C	ASP	A	227	67.910	27.516	24.017	1.00	48.24	C
ATOM	863	O	ASP	A	227	68.808	27.034	23.325	1.00	47.45	O
ATOM	864	CB	ASP	A	227	65.848	28.854	23.523	1.00	46.83	C
ATOM	865	CG	ASP	A	227	65.445	28.110	22.264	1.00	46.84	C
ATOM	866	OD1	ASP	A	227	66.094	27.099	21.924	1.00	47.01	O
ATOM	867	OD2	ASP	A	227	64.460	28.529	21.620	1.00	46.98	O
ATOM	868	N	SER	A	228	67.357	26.875	25.043	1.00	50.32	N
ATOM	869	CA	SER	A	228	67.782	25.541	25.456	1.00	52.29	C
ATOM	870	C	SER	A	228	67.580	24.487	24.366	1.00	53.54	C
ATOM	871	O	SER	A	228	68.129	23.386	24.448	1.00	54.15	O
ATOM	872	CB	SER	A	228	67.031	25.127	26.723	1.00	51.85	C
ATOM	873	OG	SER	A	228	65.636	25.099	26.492	1.00	52.33	O
ATOM	874	N	GLN	A	229	66.793	24.832	23.352	1.00	54.18	N
ATOM	875	CA	GLN	A	229	66.526	23.934	22.237	1.00	54.92	C
ATOM	876	C	GLN	A	229	67.418	24.282	21.049	1.00	55.01	C
ATOM	877	O	GLN	A	229	67.224	23.772	19.942	1.00	55.05	O
ATOM	878	CB	GLN	A	229	65.058	24.038	21.818	1.00	56.21	C
ATOM	879	CG	GLN	A	229	64.088	23.265	22.691	1.00	58.02	C
ATOM	880	CD	GLN	A	229	62.641	23.613	22.386	1.00	60.19	C
ATOM	881	OE1	GLN	A	229	62.130	24.637	22.845	1.00	60.85	O
ATOM	882	NE2	GLN	A	229	61.976	22.770	21.597	1.00	61.03	N
ATOM	883	N	LYS	A	230	68.392	25.157	21.287	1.00	54.58	N
ATOM	884	CA	LYS	A	230	69.328	25.596	20.255	1.00	53.47	C
ATOM	885	C	LYS	A	230	68.684	26.418	19.137	1.00	51.87	C
ATOM	886	O	LYS	A	230	69.257	26.554	18.055	1.00	51.62	O
ATOM	887	CB	LYS	A	230	70.057	24.390	19.652	1.00	55.91	C
ATOM	888	CG	LYS	A	230	70.846	23.572	20.669	1.00	58.78	C
ATOM	889	CD	LYS	A	230	71.977	24.381	21.305	1.00	61.46	C
ATOM	890	CE	LYS	A	230	73.062	24.738	20.290	1.00	62.75	C
ATOM	891	NZ	LYS	A	230	74.211	25.454	20.926	1.00	63.92	N
ATOM	892	N	ARG	A	231	67.501	26.970	19.395	1.00	50.44	N
ATOM	893	CA	ARG	A	231	66.816	27.796	18.400	1.00	48.86	C
ATOM	894	C	ARG	A	231	67.179	29.261	18.644	1.00	47.36	C
ATOM	895	O	ARG	A	231	67.351	29.679	19.789	1.00	45.45	O
ATOM	896	CB	ARG	A	231	65.296	27.637	18.512	1.00	50.40	C
ATOM	897	CG	ARG	A	231	64.794	26.199	18.451	1.00	51.58	C
ATOM	898	CD	ARG	A	231	63.779	25.952	19.553	1.00	53.03	C
ATOM	899	NE	ARG	A	231	62.461	26.504	19.257	1.00	55.50	N
ATOM	900	CZ	ARG	A	231	61.573	26.852	20.186	1.00	56.77	C
ATOM	901	NH1	ARG	A	231	61.869	26.716	21.471	1.00	57.45	N
ATOM	902	NH2	ARG	A	231	60.379	27.317	19.833	1.00	57.86	N
ATOM	903	N	TYR	A	232	67.294	30.034	17.567	1.00	45.64	N
ATOM	904	CA	TYR	A	232	67.623	31.450	17.671	1.00	43.85	C
ATOM	905	C	TYR	A	232	66.581	32.200	18.497	1.00	42.80	C
ATOM	906	O	TYR	A	232	65.376	31.965	18.361	1.00	41.87	O
ATOM	907	CB	TYR	A	232	67.692	32.093	16.286	1.00	43.80	C

ATOM	908	CG	TYR	A	232	68.821	31.603	15.423	1.00	44.82	C
ATOM	909	CD1	TYR	A	232	70.142	31.650	15.871	1.00	45.02	C
ATOM	910	CD2	TYR	A	232	68.573	31.094	14.151	1.00	45.58	C
ATOM	911	CE1	TYR	A	232	71.193	31.197	15.066	1.00	46.46	C
ATOM	912	CE2	TYR	A	232	69.610	30.642	13.341	1.00	46.70	C
ATOM	913	CZ	TYR	A	232	70.915	30.694	13.803	1.00	46.56	C
ATOM	914	OH	TYR	A	232	71.932	30.237	12.998	1.00	47.52	O
ATOM	915	N	LEU	A	233	67.044	33.097	19.358	1.00	41.20	N
ATOM	916	CA	LEU	A	233	66.119	33.882	20.160	1.00	40.26	C
ATOM	917	C	LEU	A	233	65.573	34.990	19.275	1.00	39.17	C
ATOM	918	O	LEU	A	233	66.231	35.428	18.328	1.00	39.41	O
ATOM	919	CB	LEU	A	233	66.816	34.493	21.380	1.00	39.71	C
ATOM	920	CG	LEU	A	233	67.335	33.532	22.453	1.00	40.47	C
ATOM	921	CD1	LEU	A	233	67.794	34.339	23.661	1.00	40.88	C
ATOM	922	CD2	LEU	A	233	66.243	32.562	22.870	1.00	39.44	C
ATOM	923	N	VAL	A	234	64.360	35.432	19.572	1.00	37.75	N
ATOM	924	CA	VAL	A	234	63.756	36.498	18.799	1.00	37.14	C
ATOM	925	C	VAL	A	234	62.766	37.241	19.681	1.00	37.43	C
ATOM	926	O	VAL	A	234	62.157	36.653	20.575	1.00	37.88	O
ATOM	927	CB	VAL	A	234	63.032	35.946	17.544	1.00	36.92	C
ATOM	928	CG1	VAL	A	234	61.826	35.102	17.954	1.00	34.91	C
ATOM	929	CG2	VAL	A	234	62.619	37.096	16.638	1.00	35.20	C
ATOM	930	N	GLY	A	235	62.631	38.540	19.444	1.00	36.87	N
ATOM	931	CA	GLY	A	235	61.703	39.335	20.223	1.00	36.91	C
ATOM	932	C	GLY	A	235	60.596	39.828	19.318	1.00	36.80	C
ATOM	933	O	GLY	A	235	60.670	39.654	18.098	1.00	37.13	O
ATOM	934	N	ALA	A	236	59.572	40.440	19.903	1.00	35.88	N
ATOM	935	CA	ALA	A	236	58.465	40.958	19.116	1.00	35.95	C
ATOM	936	C	ALA	A	236	57.824	42.165	19.791	1.00	35.70	C
ATOM	937	O	ALA	A	236	57.559	42.153	20.995	1.00	37.71	O
ATOM	938	CB	ALA	A	236	57.423	39.860	18.893	1.00	36.04	C
ATOM	939	N	GLY	A	237	57.578	43.212	19.012	1.00	35.37	N
ATOM	940	CA	GLY	A	237	56.961	44.401	19.564	1.00	36.75	C
ATOM	941	C	GLY	A	237	55.459	44.243	19.696	1.00	38.21	C
ATOM	942	O	GLY	A	237	54.837	43.542	18.895	1.00	39.76	O
ATOM	943	N	ILE	A	238	54.876	44.870	20.715	1.00	36.81	N
ATOM	944	CA	ILE	A	238	53.437	44.818	20.926	1.00	37.17	C
ATOM	945	C	ILE	A	238	52.933	46.227	21.232	1.00	37.51	C
ATOM	946	O	ILE	A	238	53.713	47.111	21.591	1.00	36.78	O
ATOM	947	CB	ILE	A	238	53.043	43.883	22.107	1.00	38.27	C
ATOM	948	CG1	ILE	A	238	53.568	44.449	23.432	1.00	38.61	C
ATOM	949	CG2	ILE	A	238	53.588	42.485	21.872	1.00	36.69	C
ATOM	950	CD1	ILE	A	238	53.046	43.710	24.665	1.00	38.14	C
ATOM	951	N	ASN	A	239	51.631	46.442	21.074	1.00	37.56	N
ATOM	952	CA	ASN	A	239	51.048	47.746	21.351	1.00	37.15	C
ATOM	953	C	ASN	A	239	50.037	47.630	22.484	1.00	38.42	C
ATOM	954	O	ASN	A	239	49.644	46.526	22.873	1.00	37.39	O
ATOM	955	CB	ASN	A	239	50.388	48.312	20.090	1.00	37.73	C
ATOM	956	CG	ASN	A	239	49.255	47.439	19.575	1.00	38.01	C
ATOM	957	OD1	ASN	A	239	48.224	47.300	20.228	1.00	37.30	O
ATOM	958	ND2	ASN	A	239	49.446	46.846	18.402	1.00	37.32	N
ATOM	959	N	THR	A	240	49.629	48.776	23.018	1.00	39.33	N
ATOM	960	CA	THR	A	240	48.678	48.832	24.121	1.00	40.33	C
ATOM	961	C	THR	A	240	47.219	48.678	23.672	1.00	42.53	C
ATOM	962	O	THR	A	240	46.299	48.869	24.468	1.00	41.92	O
ATOM	963	CB	THR	A	240	48.812	50.168	24.870	1.00	39.24	C
ATOM	964	OG1	THR	A	240	48.634	51.242	23.940	1.00	39.26	O

ATOM	965	CG2	THR	A	240	50.192	50.293	25.514	1.00	37.80	C
ATOM	966	N	ARG	A	241	47.010	48.319	22.409	1.00	44.79	N
ATOM	967	CA	ARG	A	241	45.659	48.177	21.876	1.00	48.48	C
ATOM	968	C	ARG	A	241	45.165	46.738	21.739	1.00	48.69	C
ATOM	969	O	ARG	A	241	44.291	46.305	22.487	1.00	48.51	O
ATOM	970	CB	ARG	A	241	45.565	48.862	20.509	1.00	51.38	C
ATOM	971	CG	ARG	A	241	45.987	50.327	20.508	1.00	56.77	C
ATOM	972	CD	ARG	A	241	44.854	51.258	20.917	1.00	60.32	C
ATOM	973	NE	ARG	A	241	43.743	51.209	19.965	1.00	63.77	N
ATOM	974	CZ	ARG	A	241	42.827	52.166	19.829	1.00	65.29	C
ATOM	975	NH1	ARG	A	241	42.885	53.260	20.583	1.00	65.45	N
ATOM	976	NH2	ARG	A	241	41.850	52.030	18.939	1.00	65.16	N
ATOM	977	N	ASP	A	242	45.724	46.006	20.781	1.00	48.65	N
ATOM	978	CA	ASP	A	242	45.304	44.632	20.523	1.00	50.20	C
ATOM	979	C	ASP	A	242	46.142	43.558	21.206	1.00	50.06	C
ATOM	980	O	ASP	A	242	46.237	42.442	20.702	1.00	51.04	O
ATOM	981	CB	ASP	A	242	45.306	44.362	19.013	1.00	49.94	C
ATOM	982	CG	ASP	A	242	46.696	44.458	18.404	1.00	51.08	C
ATOM	983	OD1	ASP	A	242	47.683	44.268	19.146	1.00	50.09	O
ATOM	984	OD2	ASP	A	242	46.804	44.708	17.181	1.00	51.20	O
ATOM	985	N	PHE	A	243	46.732	43.879	22.353	1.00	49.77	N
ATOM	986	CA	PHE	A	243	47.579	42.924	23.065	1.00	49.06	C
ATOM	987	C	PHE	A	243	46.889	41.647	23.549	1.00	49.87	C
ATOM	988	O	PHE	A	243	47.539	40.609	23.694	1.00	49.78	O
ATOM	989	CB	PHE	A	243	48.274	43.617	24.242	1.00	45.99	C
ATOM	990	CG	PHE	A	243	47.334	44.151	25.279	1.00	44.15	C
ATOM	991	CD1	PHE	A	243	46.841	43.323	26.283	1.00	43.69	C
ATOM	992	CD2	PHE	A	243	46.956	45.490	25.268	1.00	43.83	C
ATOM	993	CE1	PHE	A	243	45.989	43.821	27.266	1.00	42.27	C
ATOM	994	CE2	PHE	A	243	46.103	46.001	26.247	1.00	43.52	C
ATOM	995	CZ	PHE	A	243	45.619	45.163	27.249	1.00	43.49	C
ATOM	996	N	ARG	A	244	45.583	41.714	23.796	1.00	50.68	N
ATOM	997	CA	ARG	A	244	44.852	40.537	24.260	1.00	51.51	C
ATOM	998	C	ARG	A	244	44.820	39.453	23.187	1.00	51.28	C
ATOM	999	O	ARG	A	244	44.697	38.268	23.494	1.00	51.51	O
ATOM	1000	CB	ARG	A	244	43.423	40.915	24.682	1.00	52.01	C
ATOM	1001	CG	ARG	A	244	43.368	41.841	25.899	1.00	52.37	C
ATOM	1002	CD	ARG	A	244	41.939	42.089	26.374	1.00	53.17	C
ATOM	1003	NE	ARG	A	244	41.895	43.054	27.473	1.00	54.20	N
ATOM	1004	CZ	ARG	A	244	42.125	44.359	27.337	1.00	55.49	C
ATOM	1005	NH1	ARG	A	244	42.408	44.870	26.144	1.00	54.46	N
ATOM	1006	NH2	ARG	A	244	42.089	45.154	28.399	1.00	55.06	N
ATOM	1007	N	GLU	A	245	44.935	39.859	21.928	1.00	50.95	N
ATOM	1008	CA	GLU	A	245	44.940	38.906	20.826	1.00	51.31	C
ATOM	1009	C	GLU	A	245	46.362	38.666	20.335	1.00	50.29	C
ATOM	1010	O	GLU	A	245	46.770	37.526	20.107	1.00	50.46	O
ATOM	1011	CB	GLU	A	245	44.095	39.415	19.653	1.00	53.93	C
ATOM	1012	CG	GLU	A	245	42.588	39.248	19.813	1.00	58.44	C
ATOM	1013	CD	GLU	A	245	42.012	40.073	20.950	1.00	61.81	C
ATOM	1014	OE1	GLU	A	245	42.234	41.309	20.972	1.00	63.52	O
ATOM	1015	OE2	GLU	A	245	41.329	39.484	21.818	1.00	63.32	O
ATOM	1016	N	ARG	A	246	47.117	39.749	20.181	1.00	48.30	N
ATOM	1017	CA	ARG	A	246	48.489	39.671	19.689	1.00	46.47	C
ATOM	1018	C	ARG	A	246	49.447	38.897	20.599	1.00	45.04	C
ATOM	1019	O	ARG	A	246	50.187	38.036	20.132	1.00	44.61	O
ATOM	1020	CB	ARG	A	246	49.029	41.085	19.442	1.00	45.89	C
ATOM	1021	CG	ARG	A	246	50.345	41.127	18.681	1.00	45.20	C

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ATOM	1022	CD	ARG	A	246	50.833	42.556	18.513	1.00	44.73	C
ATOM	1023	NE	ARG	A	246	49.950	43.359	17.671	1.00	43.18	N
ATOM	1024	CZ	ARG	A	246	49.880	43.265	16.347	1.00	42.54	C
ATOM	1025	NH1	ARG	A	246	50.644	42.402	15.694	1.00	41.20	N
ATOM	1026	NH2	ARG	A	246	49.042	44.040	15.673	1.00	44.27	N
ATOM	1027	N	VAL	A	247	49.435	39.193	21.894	1.00	44.31	N
ATOM	1028	CA	VAL	A	247	50.335	38.509	22.819	1.00	44.71	C
ATOM	1029	C	VAL	A	247	50.238	36.976	22.757	1.00	45.57	C
ATOM	1030	O	VAL	A	247	51.245	36.296	22.530	1.00	45.24	O
ATOM	1031	CB	VAL	A	247	50.101	38.984	24.274	1.00	43.46	C
ATOM	1032	CG1	VAL	A	247	50.894	38.123	25.244	1.00	43.08	C
ATOM	1033	CG2	VAL	A	247	50.512	40.444	24.410	1.00	43.85	C
ATOM	1034	N	PRO	A	248	49.027	36.411	22.959	1.00	45.51	N
ATOM	1035	CA	PRO	A	248	48.879	34.952	22.912	1.00	44.41	C
ATOM	1036	C	PRO	A	248	49.439	34.367	21.624	1.00	44.05	C
ATOM	1037	O	PRO	A	248	50.118	33.348	21.641	1.00	44.00	O
ATOM	1038	CB	PRO	A	248	47.369	34.755	23.030	1.00	45.34	C
ATOM	1039	CG	PRO	A	248	46.956	35.899	23.898	1.00	45.42	C
ATOM	1040	CD	PRO	A	248	47.741	37.052	23.297	1.00	44.89	C
ATOM	1041	N	ALA	A	249	49.162	35.028	20.508	1.00	43.48	N
ATOM	1042	CA	ALA	A	249	49.639	34.565	19.215	1.00	43.34	C
ATOM	1043	C	ALA	A	249	51.167	34.583	19.129	1.00	44.16	C
ATOM	1044	O	ALA	A	249	51.774	33.705	18.504	1.00	43.00	O
ATOM	1045	CB	ALA	A	249	49.040	35.421	18.111	1.00	42.95	C
ATOM	1046	N	LEU	A	250	51.786	35.582	19.755	1.00	43.64	N
ATOM	1047	CA	LEU	A	250	53.238	35.692	19.729	1.00	43.74	C
ATOM	1048	C	LEU	A	250	53.862	34.647	20.643	1.00	43.57	C
ATOM	1049	O	LEU	A	250	54.897	34.069	20.322	1.00	41.77	O
ATOM	1050	CB	LEU	A	250	53.677	37.110	20.125	1.00	43.33	C
ATOM	1051	CG	LEU	A	250	53.303	38.171	19.078	1.00	43.68	C
ATOM	1052	CD1	LEU	A	250	53.687	39.554	19.563	1.00	43.65	C
ATOM	1053	CD2	LEU	A	250	54.001	37.858	17.761	1.00	42.84	C
ATOM	1054	N	VAL	A	251	53.223	34.398	21.778	1.00	44.52	N
ATOM	1055	CA	VAL	A	251	53.721	33.398	22.708	1.00	47.01	C
ATOM	1056	C	VAL	A	251	53.668	32.020	22.049	1.00	48.22	C
ATOM	1057	O	VAL	A	251	54.659	31.289	22.047	1.00	48.12	O
ATOM	1058	CB	VAL	A	251	52.883	33.364	23.993	1.00	47.37	C
ATOM	1059	CG1	VAL	A	251	53.327	32.206	24.870	1.00	48.76	C
ATOM	1060	CG2	VAL	A	251	53.031	34.678	24.739	1.00	48.75	C
ATOM	1061	N	GLU	A	252	52.512	31.676	21.483	1.00	49.02	N
ATOM	1062	CA	GLU	A	252	52.341	30.383	20.821	1.00	50.45	C
ATOM	1063	C	GLU	A	252	53.372	30.211	19.712	1.00	48.80	C
ATOM	1064	O	GLU	A	252	53.859	29.109	19.476	1.00	48.65	O
ATOM	1065	CB	GLU	A	252	50.945	30.253	20.195	1.00	53.26	C
ATOM	1066	CG	GLU	A	252	49.795	30.809	21.010	1.00	58.83	C
ATOM	1067	CD	GLU	A	252	49.648	30.175	22.379	1.00	62.50	C
ATOM	1068	OE1	GLU	A	252	48.721	30.596	23.108	1.00	64.11	O
ATOM	1069	OE2	GLU	A	252	50.444	29.267	22.727	1.00	64.32	O
ATOM	1070	N	ALA	A	253	53.688	31.303	19.022	1.00	47.24	N
ATOM	1071	CA	ALA	A	253	54.658	31.270	17.933	1.00	45.47	C
ATOM	1072	C	ALA	A	253	56.075	31.044	18.457	1.00	44.43	C
ATOM	1073	O	ALA	A	253	56.988	30.749	17.686	1.00	43.74	O
ATOM	1074	CB	ALA	A	253	54.591	32.563	17.131	1.00	45.15	C
ATOM	1075	N	GLY	A	254	56.253	31.184	19.769	1.00	43.76	N
ATOM	1076	CA	GLY	A	254	57.562	30.968	20.366	1.00	43.81	C
ATOM	1077	C	GLY	A	254	58.415	32.207	20.610	1.00	43.78	C
ATOM	1078	O	GLY	A	254	59.635	32.103	20.751	1.00	43.49	O

ATOM	1079	N	ALA	A	255	57.793	33.381	20.658	1.00	42.53	N
ATOM	1080	CA	ALA	A	255	58.540	34.611	20.902	1.00	40.96	C
ATOM	1081	C	ALA	A	255	59.227	34.506	22.263	1.00	39.56	C
ATOM	1082	O	ALA	A	255	58.595	34.154	23.260	1.00	40.08	O
ATOM	1083	CB	ALA	A	255	57.603	35.805	20.871	1.00	40.32	C
ATOM	1084	N	ASP	A	256	60.520	34.812	22.307	1.00	38.45	N
ATOM	1085	CA	ASP	A	256	61.274	34.723	23.557	1.00	38.35	C
ATOM	1086	C	ASP	A	256	61.088	35.928	24.478	1.00	37.56	C
ATOM	1087	O	ASP	A	256	61.159	35.802	25.700	1.00	36.65	O
ATOM	1088	CB	ASP	A	256	62.752	34.522	23.247	1.00	38.22	C
ATOM	1089	CG	ASP	A	256	63.007	33.235	22.497	1.00	40.05	C
ATOM	1090	OD1	ASP	A	256	62.884	32.161	23.123	1.00	42.66	O
ATOM	1091	OD2	ASP	A	256	63.313	33.292	21.286	1.00	37.79	O
ATOM	1092	N	VAL	A	257	60.847	37.093	23.890	1.00	36.57	N
ATOM	1093	CA	VAL	A	257	60.647	38.302	24.676	1.00	35.73	C
ATOM	1094	C	VAL	A	257	59.773	39.278	23.903	1.00	35.41	C
ATOM	1095	O	VAL	A	257	59.755	39.265	22.678	1.00	36.12	O
ATOM	1096	CB	VAL	A	257	61.999	38.979	25.019	1.00	34.09	C
ATOM	1097	CG1	VAL	A	257	62.725	39.352	23.746	1.00	33.95	C
ATOM	1098	CG2	VAL	A	257	61.771	40.206	25.889	1.00	33.54	C
ATOM	1099	N	LEU	A	258	59.040	40.113	24.626	1.00	34.36	N
ATOM	1100	CA	LEU	A	258	58.173	41.095	23.993	1.00	35.77	C
ATOM	1101	C	LEU	A	258	58.597	42.498	24.423	1.00	35.65	C
ATOM	1102	O	LEU	A	258	59.376	42.661	25.359	1.00	36.03	O
ATOM	1103	CB	LEU	A	258	56.713	40.857	24.402	1.00	34.23	C
ATOM	1104	CG	LEU	A	258	56.155	39.441	24.206	1.00	35.31	C
ATOM	1105	CD1	LEU	A	258	54.719	39.402	24.682	1.00	38.42	C
ATOM	1106	CD2	LEU	A	258	56.245	39.027	22.747	1.00	34.36	C
ATOM	1107	N	CYS	A	259	58.100	43.509	23.721	1.00	36.29	N
ATOM	1108	CA	CYS	A	259	58.403	44.886	24.080	1.00	34.94	C
ATOM	1109	C	CYS	A	259	57.318	45.825	23.576	1.00	34.40	C
ATOM	1110	O	CYS	A	259	57.033	45.867	22.377	1.00	33.93	O
ATOM	1111	CB	CYS	A	259	59.756	45.329	23.512	1.00	34.49	C
ATOM	1112	SG	CYS	A	259	60.296	46.925	24.191	1.00	34.45	S
ATOM	1113	N	ILE	A	260	56.712	46.568	24.496	1.00	34.72	N
ATOM	1114	CA	ILE	A	260	55.682	47.526	24.126	1.00	36.19	C
ATOM	1115	C	ILE	A	260	56.391	48.632	23.350	1.00	37.93	C
ATOM	1116	O	ILE	A	260	57.355	49.223	23.829	1.00	37.54	O
ATOM	1117	CB	ILE	A	260	55.003	48.122	25.364	1.00	35.39	C
ATOM	1118	CG1	ILE	A	260	54.471	46.988	26.247	1.00	34.45	C
ATOM	1119	CG2	ILE	A	260	53.868	49.052	24.937	1.00	34.98	C
ATOM	1120	CD1	ILE	A	260	53.866	47.456	27.556	1.00	32.91	C
ATOM	1121	N	ASP	A	261	55.905	48.886	22.143	1.00	39.60	N
ATOM	1122	CA	ASP	A	261	56.472	49.873	21.236	1.00	40.88	C
ATOM	1123	C	ASP	A	261	55.700	51.197	21.318	1.00	41.39	C
ATOM	1124	O	ASP	A	261	54.549	51.275	20.887	1.00	42.16	O
ATOM	1125	CB	ASP	A	261	56.422	49.266	19.826	1.00	42.12	C
ATOM	1126	CG	ASP	A	261	56.977	50.179	18.756	1.00	43.34	C
ATOM	1127	OD1	ASP	A	261	57.842	51.025	19.061	1.00	43.64	O
ATOM	1128	OD2	ASP	A	261	56.553	50.025	17.591	1.00	42.92	O
ATOM	1129	N	SER	A	262	56.328	52.232	21.881	1.00	40.43	N
ATOM	1130	CA	SER	A	262	55.673	53.535	22.030	1.00	39.93	C
ATOM	1131	C	SER	A	262	56.679	54.678	22.197	1.00	39.85	C
ATOM	1132	O	SER	A	262	57.777	54.464	22.711	1.00	40.98	O
ATOM	1133	CB	SER	A	262	54.733	53.492	23.242	1.00	40.30	C
ATOM	1134	OG	SER	A	262	54.167	54.761	23.518	1.00	40.02	O
ATOM	1135	N	SER	A	263	56.305	55.888	21.778	1.00	38.66	N



TABLE 6

ATOM	1136	CA	SER A 263	57.202	57.040	21.904	1.00	39.38	C
ATOM	1137	C	SER A 263	57.161	57.641	23.302	1.00	38.48	C
ATOM	1138	O	SER A 263	58.107	58.300	23.733	1.00	40.33	O
ATOM	1139	CB	SER A 263	56.867	58.121	20.869	1.00	38.57	C
ATOM	1140	OG	SER A 263	55.566	58.644	21.047	1.00	45.09	O
ATOM	1141	N	ASP A 264	56.057	57.425	24.005	1.00	35.74	N
ATOM	1142	CA	ASP A 264	55.913	57.920	25.366	1.00	33.57	C
ATOM	1143	C	ASP A 264	55.358	56.776	26.217	1.00	33.27	C
ATOM	1144	O	ASP A 264	54.144	56.587	26.313	1.00	32.17	O
ATOM	1145	CB	ASP A 264	54.975	59.136	25.399	1.00	32.37	C
ATOM	1146	CG	ASP A 264	54.581	59.537	26.812	1.00	32.47	C
ATOM	1147	OD1	ASP A 264	55.252	59.113	27.781	1.00	30.31	O
ATOM	1148	OD2	ASP A 264	53.598	60.287	26.957	1.00	32.93	O
ATOM	1149	N	GLY A 265	56.265	56.014	26.822	1.00	32.50	N
ATOM	1150	CA	GLY A 265	55.872	54.888	27.649	1.00	32.54	C
ATOM	1151	C	GLY A 265	55.400	55.262	29.039	1.00	32.72	C
ATOM	1152	O	GLY A 265	54.959	54.397	29.799	1.00	33.52	O
ATOM	1153	N	PHE A 266	55.502	56.539	29.390	1.00	31.81	N
ATOM	1154	CA	PHE A 266	55.057	56.985	30.705	1.00	32.42	C
ATOM	1155	C	PHE A 266	53.540	57.082	30.577	1.00	33.52	C
ATOM	1156	O	PHE A 266	52.967	58.166	30.582	1.00	31.71	O
ATOM	1157	CB	PHE A 266	55.664	58.352	31.043	1.00	30.79	C
ATOM	1158	CG	PHE A 266	55.742	58.641	32.525	1.00	32.48	C
ATOM	1159	CD1	PHE A 266	55.019	57.877	33.450	1.00	31.15	C
ATOM	1160	CD2	PHE A 266	56.534	59.690	32.997	1.00	31.72	C
ATOM	1161	CE1	PHE A 266	55.085	58.153	34.823	1.00	31.90	C
ATOM	1162	CE2	PHE A 266	56.611	59.976	34.361	1.00	31.70	C
ATOM	1163	CZ	PHE A 266	55.883	59.206	35.281	1.00	32.01	C
ATOM	1164	N	SER A 267	52.896	55.922	30.468	1.00	35.51	N
ATOM	1165	CA	SER A 267	51.455	55.859	30.272	1.00	35.95	C
ATOM	1166	C	SER A 267	50.735	54.762	31.045	1.00	36.73	C
ATOM	1167	O	SER A 267	51.233	53.644	31.187	1.00	34.99	O
ATOM	1168	CB	SER A 267	51.169	55.671	28.785	1.00	36.57	C
ATOM	1169	OG	SER A 267	49.795	55.428	28.553	1.00	40.30	O
ATOM	1170	N	GLU A 268	49.543	55.089	31.523	1.00	37.27	N
ATOM	1171	CA	GLU A 268	48.736	54.133	32.252	1.00	38.55	C
ATOM	1172	C	GLU A 268	48.437	52.945	31.331	1.00	38.48	C
ATOM	1173	O	GLU A 268	48.204	51.830	31.797	1.00	38.40	O
ATOM	1174	CB	GLU A 268	47.436	54.793	32.719	1.00	39.99	C
ATOM	1175	CG	GLU A 268	46.601	53.903	33.614	1.00	44.01	C
ATOM	1176	CD	GLU A 268	45.427	54.627	34.254	1.00	46.54	C
ATOM	1177	OE1	GLU A 268	44.703	53.969	35.037	1.00	48.88	O
ATOM	1178	OE2	GLU A 268	45.230	55.836	33.983	1.00	44.63	O
ATOM	1179	N	TRP A 269	48.453	53.184	30.022	1.00	38.21	N
ATOM	1180	CA	TRP A 269	48.198	52.114	29.061	1.00	39.86	C
ATOM	1181	C	TRP A 269	49.267	51.024	29.131	1.00	39.35	C
ATOM	1182	O	TRP A 269	48.967	49.849	28.917	1.00	40.08	O
ATOM	1183	CB	TRP A 269	48.129	52.657	27.630	1.00	41.72	C
ATOM	1184	CG	TRP A 269	46.968	53.561	27.393	1.00	46.52	C
ATOM	1185	CD1	TRP A 269	47.004	54.914	27.207	1.00	46.39	C
ATOM	1186	CD2	TRP A 269	45.585	53.186	27.347	1.00	47.71	C
ATOM	1187	NE1	TRP A 269	45.731	55.404	27.049	1.00	47.84	N
ATOM	1188	CE2	TRP A 269	44.841	54.366	27.130	1.00	48.66	C
ATOM	1189	CE3	TRP A 269	44.903	51.969	27.470	1.00	49.25	C
ATOM	1190	CZ2	TRP A 269	43.445	54.364	27.032	1.00	49.71	C
ATOM	1191	CZ3	TRP A 269	43.513	51.966	27.373	1.00	49.48	C
ATOM	1192	CH2	TRP A 269	42.802	53.158	27.156	1.00	50.26	C

TABLE 6

ATOM	1193	N	GLN	A	270	50.512	51.401	29.411	1.00	37.64	N
ATOM	1194	CA	GLN	A	270	51.575	50.401	29.506	1.00	37.63	C
ATOM	1195	C	GLN	A	270	51.402	49.609	30.803	1.00	37.10	C
ATOM	1196	O	GLN	A	270	51.661	48.410	30.838	1.00	37.39	O
ATOM	1197	CB	GLN	A	270	52.972	51.053	29.461	1.00	35.59	C
ATOM	1198	CG	GLN	A	270	53.233	51.888	28.205	1.00	34.03	C
ATOM	1199	CD	GLN	A	270	54.518	51.520	27.470	1.00	33.74	C
ATOM	1200	OE1	GLN	A	270	55.417	50.883	28.024	1.00	31.90	O
ATOM	1201	NE2	GLN	A	270	54.615	51.943	26.217	1.00	31.81	N
ATOM	1202	N	LYS	A	271	50.955	50.276	31.864	1.00	37.76	N
ATOM	1203	CA	LYS	A	271	50.737	49.592	33.135	1.00	39.58	C
ATOM	1204	C	LYS	A	271	49.646	48.532	32.968	1.00	39.28	C
ATOM	1205	O	LYS	A	271	49.780	47.412	33.455	1.00	39.33	O
ATOM	1206	CB	LYS	A	271	50.320	50.574	34.228	1.00	41.44	C
ATOM	1207	CG	LYS	A	271	50.086	49.901	35.578	1.00	43.95	C
ATOM	1208	CD	LYS	A	271	49.844	50.909	36.688	1.00	46.05	C
ATOM	1209	CE	LYS	A	271	49.756	50.209	38.044	1.00	48.90	C
ATOM	1210	NZ	LYS	A	271	49.762	51.161	39.201	1.00	50.93	N
ATOM	1211	N	ILE	A	272	48.574	48.896	32.269	1.00	38.91	N
ATOM	1212	CA	ILE	A	272	47.462	47.984	32.029	1.00	39.12	C
ATOM	1213	C	ILE	A	272	47.926	46.793	31.198	1.00	39.33	C
ATOM	1214	O	ILE	A	272	47.616	45.654	31.517	1.00	40.20	O
ATOM	1215	CB	ILE	A	272	46.297	48.701	31.300	1.00	38.48	C
ATOM	1216	CG1	ILE	A	272	45.626	49.687	32.257	1.00	38.00	C
ATOM	1217	CG2	ILE	A	272	45.286	47.682	30.781	1.00	38.67	C
ATOM	1218	CD1	ILE	A	272	44.609	50.606	31.596	1.00	39.18	C
ATOM	1219	N	THR	A	273	48.685	47.061	30.143	1.00	38.73	N
ATOM	1220	CA	THR	A	273	49.184	45.999	29.287	1.00	38.01	C
ATOM	1221	C	THR	A	273	50.089	45.016	30.030	1.00	39.07	C
ATOM	1222	O	THR	A	273	49.935	43.802	29.896	1.00	38.49	O
ATOM	1223	CB	THR	A	273	49.959	46.577	28.091	1.00	37.70	C
ATOM	1224	OG1	THR	A	273	49.086	47.409	27.316	1.00	37.99	O
ATOM	1225	CG2	THR	A	273	50.494	45.458	27.212	1.00	36.21	C
ATOM	1226	N	ILE	A	274	51.045	45.537	30.797	1.00	38.89	N
ATOM	1227	CA	ILE	A	274	51.958	44.681	31.547	1.00	38.36	C
ATOM	1228	C	ILE	A	274	51.168	43.894	32.586	1.00	39.27	C
ATOM	1229	O	ILE	A	274	51.452	42.726	32.847	1.00	37.60	O
ATOM	1230	CB	ILE	A	274	53.040	45.507	32.277	1.00	38.10	C
ATOM	1231	CG1	ILE	A	274	53.911	46.250	31.259	1.00	38.10	C
ATOM	1232	CG2	ILE	A	274	53.887	44.588	33.163	1.00	37.28	C
ATOM	1233	CD1	ILE	A	274	54.879	47.247	31.888	1.00	37.22	C
ATOM	1234	N	GLY	A	275	50.177	44.547	33.182	1.00	39.95	N
ATOM	1235	CA	GLY	A	275	49.361	43.884	34.183	1.00	41.68	C
ATOM	1236	C	GLY	A	275	48.607	42.702	33.600	1.00	41.85	C
ATOM	1237	O	GLY	A	275	48.576	41.622	34.187	1.00	42.65	O
ATOM	1238	N	TRP	A	276	48.002	42.904	32.437	1.00	41.82	N
ATOM	1239	CA	TRP	A	276	47.242	41.847	31.785	1.00	42.57	C
ATOM	1240	C	TRP	A	276	48.144	40.658	31.487	1.00	43.64	C
ATOM	1241	O	TRP	A	276	47.707	39.505	31.545	1.00	42.42	O
ATOM	1242	CB	TRP	A	276	46.641	42.356	30.479	1.00	42.84	C
ATOM	1243	CG	TRP	A	276	45.770	41.356	29.809	1.00	43.77	C
ATOM	1244	CD1	TRP	A	276	44.431	41.168	30.008	1.00	44.10	C
ATOM	1245	CD2	TRP	A	276	46.170	40.390	28.829	1.00	44.12	C
ATOM	1246	NE1	TRP	A	276	43.972	40.146	29.209	1.00	43.95	N
ATOM	1247	CE2	TRP	A	276	45.018	39.651	28.475	1.00	44.37	C
ATOM	1248	CE3	TRP	A	276	47.391	40.077	28.216	1.00	44.62	C
ATOM	1249	CZ2	TRP	A	276	45.049	38.620	27.533	1.00	44.03	C

TABLE 6

ATOM	1250	CZ3	TRP	A	276	47.424	39.049	27.278	1.00	44.60	C
ATOM	1251	CH2	TRP	A	276	46.256	38.333	26.946	1.00	44.88	C
ATOM	1252	N	ILE	A	277	49.401	40.945	31.159	1.00	43.10	N
ATOM	1253	CA	ILE	A	277	50.366	39.899	30.849	1.00	43.16	C
ATOM	1254	C	ILE	A	277	50.781	39.127	32.101	1.00	44.32	C
ATOM	1255	O	ILE	A	277	50.872	37.901	32.079	1.00	43.89	O
ATOM	1256	CB	ILE	A	277	51.619	40.490	30.160	1.00	42.16	C
ATOM	1257	CG1	ILE	A	277	51.249	40.985	28.759	1.00	40.86	C
ATOM	1258	CG2	ILE	A	277	52.724	39.444	30.084	1.00	41.70	C
ATOM	1259	CD1	ILE	A	277	52.370	41.677	28.027	1.00	39.92	C
ATOM	1260	N	ARG	A	278	51.029	39.845	33.190	1.00	45.51	N
ATOM	1261	CA	ARG	A	278	51.427	39.217	34.445	1.00	47.63	C
ATOM	1262	C	ARG	A	278	50.313	38.350	35.026	1.00	49.58	C
ATOM	1263	O	ARG	A	278	50.570	37.299	35.617	1.00	49.82	O
ATOM	1264	CB	ARG	A	278	51.815	40.287	35.466	1.00	46.39	C
ATOM	1265	CG	ARG	A	278	53.125	40.967	35.172	1.00	44.78	C
ATOM	1266	CD	ARG	A	278	54.320	40.087	35.522	1.00	43.71	C
ATOM	1267	NE	ARG	A	278	55.551	40.701	35.032	1.00	42.04	N
ATOM	1268	CZ	ARG	A	278	56.199	40.311	33.942	1.00	40.35	C
ATOM	1269	NH1	ARG	A	278	55.751	39.287	33.229	1.00	38.71	N
ATOM	1270	NH2	ARG	A	278	57.272	40.976	33.536	1.00	39.83	N
ATOM	1271	N	GLU	A	279	49.077	38.801	34.853	1.00	51.53	N
ATOM	1272	CA	GLU	A	279	47.908	38.094	35.359	1.00	53.86	C
ATOM	1273	C	GLU	A	279	47.596	36.819	34.575	1.00	53.60	C
ATOM	1274	O	GLU	A	279	47.070	35.854	35.127	1.00	53.73	O
ATOM	1275	CB	GLU	A	279	46.703	39.048	35.343	1.00	56.33	C
ATOM	1276	CG	GLU	A	279	45.337	38.391	35.440	1.00	61.52	C
ATOM	1277	CD	GLU	A	279	44.917	37.730	34.137	1.00	64.89	C
ATOM	1278	OE1	GLU	A	279	44.882	38.429	33.096	1.00	66.72	O
ATOM	1279	OE2	GLU	A	279	44.623	36.512	34.154	1.00	66.94	O
ATOM	1280	N	LYS	A	280	47.942	36.813	33.294	1.00	53.24	N
ATOM	1281	CA	LYS	A	280	47.672	35.671	32.432	1.00	53.14	C
ATOM	1282	C	LYS	A	280	48.863	34.724	32.294	1.00	52.81	C
ATOM	1283	O	LYS	A	280	48.685	33.537	32.029	1.00	52.92	O
ATOM	1284	CB	LYS	A	280	47.250	36.182	31.049	1.00	55.15	C
ATOM	1285	CG	LYS	A	280	46.435	35.209	30.199	1.00	57.74	C
ATOM	1286	CD	LYS	A	280	47.296	34.157	29.519	1.00	59.91	C
ATOM	1287	CE	LYS	A	280	46.441	33.170	28.715	1.00	61.61	C
ATOM	1288	NZ	LYS	A	280	45.645	33.828	27.634	1.00	61.74	N
ATOM	1289	N	TYR	A	281	50.074	35.241	32.490	1.00	51.29	N
ATOM	1290	CA	TYR	A	281	51.273	34.426	32.338	1.00	47.99	C
ATOM	1291	C	TYR	A	281	52.260	34.496	33.494	1.00	46.98	C
ATOM	1292	O	TYR	A	281	53.268	33.794	33.485	1.00	46.65	O
ATOM	1293	CB	TYR	A	281	52.016	34.835	31.066	1.00	47.79	C
ATOM	1294	CG	TYR	A	281	51.239	34.703	29.778	1.00	46.17	C
ATOM	1295	CD1	TYR	A	281	51.086	33.465	29.154	1.00	46.76	C
ATOM	1296	CD2	TYR	A	281	50.699	35.828	29.153	1.00	45.95	C
ATOM	1297	CE1	TYR	A	281	50.420	33.353	27.930	1.00	46.42	C
ATOM	1298	CE2	TYR	A	281	50.032	35.729	27.939	1.00	45.43	C
ATOM	1299	CZ	TYR	A	281	49.897	34.492	27.330	1.00	46.84	C
ATOM	1300	OH	TYR	A	281	49.255	34.401	26.118	1.00	47.66	O
ATOM	1301	N	GLY	A	282	51.990	35.336	34.484	1.00	46.78	N
ATOM	1302	CA	GLY	A	282	52.926	35.458	35.588	1.00	46.99	C
ATOM	1303	C	GLY	A	282	54.252	35.993	35.064	1.00	48.06	C
ATOM	1304	O	GLY	A	282	54.270	36.784	34.122	1.00	45.90	O
ATOM	1305	N	ASP	A	283	55.362	35.566	35.660	1.00	49.43	N
ATOM	1306	CA	ASP	A	283	56.682	36.019	35.223	1.00	50.90	C

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ATOM	1307	C	ASP	A	283	57.290	35.115	34.146	1.00	50.49	C
ATOM	1308	O	ASP	A	283	58.501	35.117	33.940	1.00	51.46	O
ATOM	1309	CB	ASP	A	283	57.637	36.099	36.418	1.00	52.54	C
ATOM	1310	CG	ASP	A	283	57.266	37.208	37.395	1.00	56.76	C
ATOM	1311	OD1	ASP	A	283	57.213	38.387	36.974	1.00	57.47	O
ATOM	1312	OD2	ASP	A	283	57.034	36.903	38.587	1.00	57.67	O
ATOM	1313	N	LYS	A	284	56.452	34.354	33.450	1.00	50.15	N
ATOM	1314	CA	LYS	A	284	56.935	33.443	32.412	1.00	50.38	C
ATOM	1315	C	LYS	A	284	57.073	34.116	31.052	1.00	48.98	C
ATOM	1316	O	LYS	A	284	57.780	33.632	30.168	1.00	48.72	O
ATOM	1317	CB	LYS	A	284	56.003	32.229	32.297	1.00	53.78	C
ATOM	1318	CG	LYS	A	284	56.138	31.226	33.449	1.00	58.18	C
ATOM	1319	CD	LYS	A	284	55.845	31.868	34.802	1.00	60.71	C
ATOM	1320	CE	LYS	A	284	56.104	30.899	35.950	1.00	63.62	C
ATOM	1321	NZ	LYS	A	284	55.874	31.551	37.276	1.00	64.97	N
ATOM	1322	N	VAL	A	285	56.374	35.227	30.880	1.00	46.54	N
ATOM	1323	CA	VAL	A	285	56.445	35.969	29.634	1.00	43.33	C
ATOM	1324	C	VAL	A	285	57.170	37.270	29.950	1.00	41.39	C
ATOM	1325	O	VAL	A	285	56.759	38.019	30.840	1.00	40.81	O
ATOM	1326	CB	VAL	A	285	55.039	36.252	29.086	1.00	43.01	C
ATOM	1327	CG1	VAL	A	285	55.122	37.183	27.887	1.00	42.67	C
ATOM	1328	CG2	VAL	A	285	54.380	34.936	28.690	1.00	42.46	C
ATOM	1329	N	LYS	A	286	58.261	37.520	29.234	1.00	38.50	N
ATOM	1330	CA	LYS	A	286	59.060	38.720	29.451	1.00	36.37	C
ATOM	1331	C	LYS	A	286	58.594	39.861	28.556	1.00	34.87	C
ATOM	1332	O	LYS	A	286	58.383	39.680	27.359	1.00	34.64	O
ATOM	1333	CB	LYS	A	286	60.541	38.417	29.193	1.00	34.83	C
ATOM	1334	CG	LYS	A	286	61.077	37.232	29.993	1.00	35.06	C
ATOM	1335	CD	LYS	A	286	60.840	37.401	31.495	1.00	34.44	C
ATOM	1336	CE	LYS	A	286	61.373	36.207	32.282	1.00	35.15	C
ATOM	1337	NZ	LYS	A	286	61.155	36.341	33.759	1.00	35.87	N
ATOM	1338	N	VAL	A	287	58.437	41.042	29.139	1.00	33.15	N
ATOM	1339	CA	VAL	A	287	57.979	42.185	28.367	1.00	33.28	C
ATOM	1340	C	VAL	A	287	58.706	43.480	28.730	1.00	32.69	C
ATOM	1341	O	VAL	A	287	58.745	43.886	29.892	1.00	32.80	O
ATOM	1342	CB	VAL	A	287	56.437	42.379	28.543	1.00	32.82	C
ATOM	1343	CG1	VAL	A	287	56.083	42.447	30.020	1.00	32.50	C
ATOM	1344	CG2	VAL	A	287	55.978	43.644	27.843	1.00	34.03	C
ATOM	1345	N	GLY	A	288	59.295	44.113	27.722	1.00	33.35	N
ATOM	1346	CA	GLY	A	288	59.983	45.373	27.935	1.00	32.17	C
ATOM	1347	C	GLY	A	288	58.966	46.477	27.731	1.00	32.40	C
ATOM	1348	O	GLY	A	288	57.953	46.263	27.056	1.00	33.04	O
ATOM	1349	N	ALA	A	289	59.221	47.646	28.309	1.00	31.58	N
ATOM	1350	CA	ALA	A	289	58.309	48.783	28.190	1.00	32.03	C
ATOM	1351	C	ALA	A	289	59.088	50.084	27.944	1.00	33.08	C
ATOM	1352	O	ALA	A	289	60.304	50.126	28.138	1.00	32.71	O
ATOM	1353	CB	ALA	A	289	57.463	48.899	29.464	1.00	31.09	C
ATOM	1354	N	GLY	A	290	58.384	51.135	27.519	1.00	32.95	N
ATOM	1355	CA	GLY	A	290	59.027	52.415	27.242	1.00	33.02	C
ATOM	1356	C	GLY	A	290	58.397	53.107	26.039	1.00	33.75	C
ATOM	1357	O	GLY	A	290	57.396	52.622	25.517	1.00	34.16	O
ATOM	1358	N	ASN	A	291	58.975	54.210	25.560	1.00	32.53	N
ATOM	1359	CA	ASN	A	291	60.199	54.804	26.095	1.00	31.60	C
ATOM	1360	C	ASN	A	291	59.964	55.899	27.134	1.00	31.33	C
ATOM	1361	O	ASN	A	291	58.936	56.577	27.123	1.00	30.56	O
ATOM	1362	CB	ASN	A	291	61.019	55.405	24.943	1.00	30.32	C
ATOM	1363	CG	ASN	A	291	61.501	54.354	23.958	1.00	31.30	C

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ATOM	1364	OD1	ASN	A	291	60.981	53.240	23.923	1.00	31.67	O
ATOM	1365	ND2	ASN	A	291	62.495	54.708	23.147	1.00	28.26	N
ATOM	1366	N	ILE	A	292	60.933	56.052	28.033	1.00	30.09	N
ATOM	1367	CA	ILE	A	292	60.904	57.090	29.053	1.00	30.04	C
ATOM	1368	C	ILE	A	292	62.276	57.774	29.013	1.00	30.43	C
ATOM	1369	O	ILE	A	292	63.205	57.266	28.375	1.00	30.27	O
ATOM	1370	CB	ILE	A	292	60.583	56.526	30.484	1.00	29.76	C
ATOM	1371	CG1	ILE	A	292	61.381	55.253	30.787	1.00	30.31	C
ATOM	1372	CG2	ILE	A	292	59.105	56.229	30.588	1.00	30.24	C
ATOM	1373	CD1	ILE	A	292	62.856	55.473	31.028	1.00	29.06	C
ATOM	1374	N	VAL	A	293	62.409	58.924	29.668	1.00	30.29	N
ATOM	1375	CA	VAL	A	293	63.680	59.640	29.641	1.00	29.96	C
ATOM	1376	C	VAL	A	293	64.153	60.149	30.991	1.00	30.54	C
ATOM	1377	O	VAL	A	293	65.175	60.829	31.068	1.00	30.92	O
ATOM	1378	CB	VAL	A	293	63.612	60.839	28.680	1.00	29.70	C
ATOM	1379	CG1	VAL	A	293	63.492	60.351	27.238	1.00	27.77	C
ATOM	1380	CG2	VAL	A	293	62.418	61.717	29.045	1.00	28.93	C
ATOM	1381	N	ASP	A	294	63.414	59.841	32.053	1.00	29.98	N
ATOM	1382	CA	ASP	A	294	63.822	60.282	33.384	1.00	30.26	C
ATOM	1383	C	ASP	A	294	63.503	59.249	34.465	1.00	29.51	C
ATOM	1384	O	ASP	A	294	62.859	58.237	34.201	1.00	28.45	O
ATOM	1385	CB	ASP	A	294	63.184	61.645	33.733	1.00	29.22	C
ATOM	1386	CG	ASP	A	294	61.667	61.579	33.893	1.00	30.83	C
ATOM	1387	OD1	ASP	A	294	61.069	60.517	33.634	1.00	30.38	O
ATOM	1388	OD2	ASP	A	294	61.065	62.609	34.277	1.00	31.14	O
ATOM	1389	N	GLY	A	295	63.970	59.516	35.680	1.00	30.57	N
ATOM	1390	CA	GLY	A	295	63.739	58.613	36.793	1.00	32.07	C
ATOM	1391	C	GLY	A	295	62.278	58.313	37.065	1.00	33.84	C
ATOM	1392	O	GLY	A	295	61.928	57.165	37.359	1.00	33.24	O
ATOM	1393	N	GLU	A	296	61.426	59.337	36.986	1.00	35.06	N
ATOM	1394	CA	GLU	A	296	59.986	59.172	37.221	1.00	36.02	C
ATOM	1395	C	GLU	A	296	59.400	58.100	36.315	1.00	34.20	C
ATOM	1396	O	GLU	A	296	58.739	57.179	36.775	1.00	34.47	O
ATOM	1397	CB	GLU	A	296	59.222	60.473	36.938	1.00	39.08	C
ATOM	1398	CG	GLU	A	296	59.026	61.420	38.101	1.00	44.63	C
ATOM	1399	CD	GLU	A	296	57.731	62.229	37.955	1.00	49.36	C
ATOM	1400	OE1	GLU	A	296	57.490	62.820	36.868	1.00	49.76	O
ATOM	1401	OE2	GLU	A	296	56.946	62.266	38.930	1.00	52.97	O
ATOM	1402	N	GLY	A	297	59.634	58.251	35.015	1.00	34.02	N
ATOM	1403	CA	GLY	A	297	59.120	57.307	34.040	1.00	32.68	C
ATOM	1404	C	GLY	A	297	59.651	55.901	34.239	1.00	32.72	C
ATOM	1405	O	GLY	A	297	58.912	54.930	34.091	1.00	33.28	O
ATOM	1406	N	PHE	A	298	60.937	55.791	34.558	1.00	31.86	N
ATOM	1407	CA	PHE	A	298	61.557	54.490	34.793	1.00	32.60	C
ATOM	1408	C	PHE	A	298	60.832	53.804	35.946	1.00	33.15	C
ATOM	1409	O	PHE	A	298	60.382	52.668	35.829	1.00	33.25	O
ATOM	1410	CB	PHE	A	298	63.029	54.656	35.183	1.00	30.95	C
ATOM	1411	CG	PHE	A	298	63.635	53.414	35.773	1.00	31.63	C
ATOM	1412	CD1	PHE	A	298	64.151	52.414	34.953	1.00	31.00	C
ATOM	1413	CD2	PHE	A	298	63.622	53.209	37.149	1.00	31.36	C
ATOM	1414	CE1	PHE	A	298	64.641	51.221	35.498	1.00	30.09	C
ATOM	1415	CE2	PHE	A	298	64.108	52.023	37.701	1.00	30.73	C
ATOM	1416	CZ	PHE	A	298	64.616	51.028	36.871	1.00	30.06	C
ATOM	1417	N	ARG	A	299	60.743	54.528	37.057	1.00	33.22	N
ATOM	1418	CA	ARG	A	299	60.111	54.074	38.291	1.00	34.33	C
ATOM	1419	C	ARG	A	299	58.671	53.593	38.074	1.00	34.12	C
ATOM	1420	O	ARG	A	299	58.252	52.577	38.635	1.00	32.73	O

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ATOM	1421	CB	ARG	A	299	60.161	55.228	39.300	1.00	35.94	C
ATOM	1422	CG	ARG	A	299	59.224	55.130	40.491	1.00	41.25	C
ATOM	1423	CD	ARG	A	299	59.892	54.483	41.682	1.00	42.59	C
ATOM	1424	NE	ARG	A	299	61.160	55.121	42.041	1.00	44.25	N
ATOM	1425	CZ	ARG	A	299	61.927	54.709	43.050	1.00	44.43	C
ATOM	1426	NH1	ARG	A	299	61.544	53.677	43.791	1.00	42.61	N
ATOM	1427	NH2	ARG	A	299	63.085	55.304	43.304	1.00	44.39	N
ATOM	1428	N	TYR	A	300	57.920	54.318	37.255	1.00	32.22	N
ATOM	1429	CA	TYR	A	300	56.540	53.948	36.981	1.00	32.60	C
ATOM	1430	C	TYR	A	300	56.453	52.607	36.251	1.00	33.71	C
ATOM	1431	O	TYR	A	300	55.643	51.750	36.606	1.00	34.20	O
ATOM	1432	CB	TYR	A	300	55.855	55.027	36.143	1.00	32.42	C
ATOM	1433	CG	TYR	A	300	54.398	54.736	35.864	1.00	32.17	C
ATOM	1434	CD1	TYR	A	300	53.418	54.973	36.828	1.00	31.34	C
ATOM	1435	CD2	TYR	A	300	54.002	54.216	34.637	1.00	30.83	C
ATOM	1436	CE1	TYR	A	300	52.073	54.700	36.568	1.00	30.71	C
ATOM	1437	CE2	TYR	A	300	52.670	53.942	34.369	1.00	32.95	C
ATOM	1438	CZ	TYR	A	300	51.712	54.186	35.334	1.00	31.71	C
ATOM	1439	OH	TYR	A	300	50.396	53.929	35.041	1.00	31.68	O
ATOM	1440	N	LEU	A	301	57.275	52.429	35.222	1.00	32.89	N
ATOM	1441	CA	LEU	A	301	57.257	51.180	34.477	1.00	32.98	C
ATOM	1442	C	LEU	A	301	57.881	50.045	35.304	1.00	33.13	C
ATOM	1443	O	LEU	A	301	57.547	48.878	35.114	1.00	33.27	O
ATOM	1444	CB	LEU	A	301	57.992	51.349	33.140	1.00	31.76	C
ATOM	1445	CG	LEU	A	301	57.342	52.341	32.160	1.00	31.64	C
ATOM	1446	CD1	LEU	A	301	58.174	52.459	30.891	1.00	29.55	C
ATOM	1447	CD2	LEU	A	301	55.928	51.870	31.823	1.00	30.86	C
ATOM	1448	N	ALA	A	302	58.780	50.390	36.220	1.00	32.34	N
ATOM	1449	CA	ALA	A	302	59.418	49.385	37.066	1.00	34.28	C
ATOM	1450	C	ALA	A	302	58.355	48.806	38.008	1.00	34.11	C
ATOM	1451	O	ALA	A	302	58.169	47.590	38.082	1.00	34.00	O
ATOM	1452	CB	ALA	A	302	60.563	50.012	37.866	1.00	31.06	C
ATOM	1453	N	ASP	A	303	57.652	49.686	38.711	1.00	34.91	N
ATOM	1454	CA	ASP	A	303	56.595	49.262	39.618	1.00	35.64	C
ATOM	1455	C	ASP	A	303	55.485	48.552	38.846	1.00	36.85	C
ATOM	1456	O	ASP	A	303	54.761	47.737	39.408	1.00	37.85	O
ATOM	1457	CB	ASP	A	303	56.008	50.458	40.365	1.00	35.88	C
ATOM	1458	CG	ASP	A	303	56.956	51.022	41.398	1.00	38.13	C
ATOM	1459	OD1	ASP	A	303	57.843	50.276	41.863	1.00	40.12	O
ATOM	1460	OD2	ASP	A	303	56.800	52.205	41.764	1.00	40.53	O
ATOM	1461	N	ALA	A	304	55.356	48.859	37.557	1.00	36.62	N
ATOM	1462	CA	ALA	A	304	54.331	48.233	36.725	1.00	36.26	C
ATOM	1463	C	ALA	A	304	54.719	46.802	36.343	1.00	36.18	C
ATOM	1464	O	ALA	A	304	53.876	46.035	35.868	1.00	35.97	O
ATOM	1465	CB	ALA	A	304	54.095	49.063	35.466	1.00	35.66	C
ATOM	1466	N	GLY	A	305	55.994	46.454	36.519	1.00	35.62	N
ATOM	1467	CA	GLY	A	305	56.440	45.102	36.212	1.00	33.54	C
ATOM	1468	C	GLY	A	305	57.266	44.840	34.964	1.00	34.83	C
ATOM	1469	O	GLY	A	305	57.559	43.678	34.654	1.00	34.47	O
ATOM	1470	N	ALA	A	306	57.648	45.890	34.239	1.00	34.51	N
ATOM	1471	CA	ALA	A	306	58.448	45.718	33.022	1.00	34.01	C
ATOM	1472	C	ALA	A	306	59.718	44.902	33.304	1.00	33.98	C
ATOM	1473	O	ALA	A	306	60.302	45.017	34.378	1.00	33.26	O
ATOM	1474	CB	ALA	A	306	58.825	47.084	32.450	1.00	33.19	C
ATOM	1475	N	ASP	A	307	60.137	44.085	32.339	1.00	34.27	N
ATOM	1476	CA	ASP	A	307	61.341	43.257	32.489	1.00	35.04	C
ATOM	1477	C	ASP	A	307	62.605	44.014	32.075	1.00	34.78	C

ATOM	1478	O	ASP	A	307	63.716	43.658	32.462	1.00	35.12	O
ATOM	1479	CB	ASP	A	307	61.191	41.967	31.684	1.00	34.06	C
ATOM	1480	CG	ASP	A	307	60.205	41.010	32.322	1.00	35.84	C
ATOM	1481	OD1	ASP	A	307	60.511	40.519	33.429	1.00	33.94	O
ATOM	1482	OD2	ASP	A	307	59.127	40.764	31.733	1.00	35.52	O
ATOM	1483	N	PHE	A	308	62.418	45.042	31.255	1.00	33.72	N
ATOM	1484	CA	PHE	A	308	63.499	45.920	30.838	1.00	32.62	C
ATOM	1485	C	PHE	A	308	62.811	47.210	30.396	1.00	32.76	C
ATOM	1486	O	PHE	A	308	61.660	47.194	29.961	1.00	32.31	O
ATOM	1487	CB	PHE	A	308	64.389	45.282	29.751	1.00	30.88	C
ATOM	1488	CG	PHE	A	308	63.833	45.325	28.351	1.00	31.29	C
ATOM	1489	CD1	PHE	A	308	63.823	46.514	27.622	1.00	30.95	C
ATOM	1490	CD2	PHE	A	308	63.399	44.152	27.729	1.00	31.69	C
ATOM	1491	CE1	PHE	A	308	63.396	46.536	26.289	1.00	31.24	C
ATOM	1492	CE2	PHE	A	308	62.968	44.158	26.393	1.00	32.80	C
ATOM	1493	CZ	PHE	A	308	62.968	45.356	25.671	1.00	33.19	C
ATOM	1494	N	ILE	A	309	63.499	48.330	30.558	1.00	32.53	N
ATOM	1495	CA	ILE	A	309	62.919	49.618	30.221	1.00	31.47	C
ATOM	1496	C	ILE	A	309	63.723	50.323	29.138	1.00	31.48	C
ATOM	1497	O	ILE	A	309	64.952	50.428	29.228	1.00	29.64	O
ATOM	1498	CB	ILE	A	309	62.809	50.477	31.502	1.00	31.63	C
ATOM	1499	CG1	ILE	A	309	61.767	49.835	32.431	1.00	29.83	C
ATOM	1500	CG2	ILE	A	309	62.467	51.924	31.160	1.00	30.76	C
ATOM	1501	CD1	ILE	A	309	61.696	50.434	33.823	1.00	30.01	C
ATOM	1502	N	LYS	A	310	63.016	50.794	28.109	1.00	30.52	N
ATOM	1503	CA	LYS	A	310	63.649	51.456	26.977	1.00	30.74	C
ATOM	1504	C	LYS	A	310	63.730	52.975	27.166	1.00	30.46	C
ATOM	1505	O	LYS	A	310	62.746	53.630	27.515	1.00	30.84	O
ATOM	1506	CB	LYS	A	310	62.899	51.092	25.693	1.00	30.85	C
ATOM	1507	CG	LYS	A	310	63.787	50.985	24.461	1.00	30.94	C
ATOM	1508	CD	LYS	A	310	63.396	49.797	23.572	1.00	29.84	C
ATOM	1509	CE	LYS	A	310	62.017	49.979	22.964	1.00	28.94	C
ATOM	1510	NZ	LYS	A	310	61.928	51.268	22.219	1.00	28.29	N
ATOM	1511	N	ILE	A	311	64.917	53.517	26.920	1.00	29.41	N
ATOM	1512	CA	ILE	A	311	65.197	54.943	27.097	1.00	29.44	C
ATOM	1513	C	ILE	A	311	65.362	55.711	25.796	1.00	29.18	C
ATOM	1514	O	ILE	A	311	66.100	55.288	24.908	1.00	28.56	O
ATOM	1515	CB	ILE	A	311	66.517	55.158	27.887	1.00	28.45	C
ATOM	1516	CG1	ILE	A	311	66.498	54.353	29.186	1.00	27.16	C
ATOM	1517	CG2	ILE	A	311	66.721	56.653	28.178	1.00	25.82	C
ATOM	1518	CD1	ILE	A	311	67.864	54.280	29.857	1.00	27.18	C
ATOM	1519	N	GLY	A	312	64.690	56.852	25.692	1.00	30.57	N
ATOM	1520	CA	GLY	A	312	64.856	57.660	24.502	1.00	30.97	C
ATOM	1521	C	GLY	A	312	63.637	58.202	23.798	1.00	33.02	C
ATOM	1522	O	GLY	A	312	62.739	57.460	23.412	1.00	32.51	O
ATOM	1523	N	ILE	A	313	63.622	59.519	23.631	1.00	35.45	N
ATOM	1524	CA	ILE	A	313	62.558	60.210	22.920	1.00	37.38	C
ATOM	1525	C	ILE	A	313	63.194	61.380	22.181	1.00	40.19	C
ATOM	1526	O	ILE	A	313	63.759	62.280	22.807	1.00	39.32	O
ATOM	1527	CB	ILE	A	313	61.484	60.766	23.865	1.00	36.69	C
ATOM	1528	CG1	ILE	A	313	60.825	59.625	24.646	1.00	37.09	C
ATOM	1529	CG2	ILE	A	313	60.437	61.517	23.053	1.00	36.17	C
ATOM	1530	CD1	ILE	A	313	59.810	60.097	25.666	1.00	34.32	C
ATOM	1531	N	GLY	A	314	63.121	61.350	20.853	1.00	43.35	N
ATOM	1532	CA	GLY	A	314	63.682	62.424	20.055	1.00	47.92	C
ATOM	1533	C	GLY	A	314	65.013	62.127	19.386	1.00	51.41	C
ATOM	1534	O	GLY	A	314	65.318	62.690	18.333	1.00	52.28	O

TABLE 6

ATOM	1535	N	GLY A 315	65.804	61.244	19.990	1.00	53.66	N
ATOM	1536	CA	GLY A 315	67.109	60.902	19.443	1.00	55.96	C
ATOM	1537	C	GLY A 315	67.151	60.218	18.085	1.00	57.72	C
ATOM	1538	O	GLY A 315	68.050	60.499	17.288	1.00	58.05	O
ATOM	1539	N	GLY A 316	66.202	59.320	17.818	1.00	58.68	N
ATOM	1540	CA	GLY A 316	66.174	58.615	16.542	1.00	60.38	C
ATOM	1541	C	GLY A 316	66.578	59.446	15.330	1.00	61.63	C
ATOM	1542	O	GLY A 316	66.212	60.617	15.216	1.00	61.39	O
ATOM	1543	N	SER A 317	67.328	58.838	14.415	1.00	63.21	N
ATOM	1544	CA	SER A 317	67.786	59.529	13.211	1.00	64.85	C
ATOM	1545	C	SER A 317	66.626	59.987	12.331	1.00	66.57	C
ATOM	1546	O	SER A 317	66.711	61.022	11.667	1.00	66.58	O
ATOM	1547	CB	SER A 317	68.714	58.621	12.395	1.00	64.42	C
ATOM	1548	OG	SER A 317	68.001	57.556	11.787	1.00	62.55	O
ATOM	1549	N	ILE A 318	65.547	59.212	12.324	1.00	68.56	N
ATOM	1550	CA	ILE A 318	64.376	59.542	11.517	1.00	71.22	C
ATOM	1551	C	ILE A 318	63.259	60.192	12.327	1.00	72.91	C
ATOM	1552	O	ILE A 318	62.098	60.185	11.913	1.00	73.31	O
ATOM	1553	CB	ILE A 318	63.815	58.286	10.805	1.00	71.18	C
ATOM	1554	CG1	ILE A 318	63.983	57.051	11.698	1.00	71.48	C
ATOM	1555	CG2	ILE A 318	64.529	58.080	9.475	1.00	70.96	C
ATOM	1556	CD1	ILE A 318	63.326	57.162	13.049	1.00	70.32	C
ATOM	1557	N	CYS A 319	63.617	60.755	13.478	1.00	75.09	N
ATOM	1558	CA	CYS A 319	62.651	61.417	14.350	1.00	77.73	C
ATOM	1559	C	CYS A 319	62.958	62.911	14.448	1.00	78.61	C
ATOM	1560	O	CYS A 319	64.091	63.300	14.731	1.00	78.56	O
ATOM	1561	CB	CYS A 319	62.686	60.789	15.746	1.00	78.48	C
ATOM	1562	SG	CYS A 319	61.465	61.464	16.899	1.00	81.82	S
ATOM	1563	N	ILE A 320	61.947	63.743	14.214	1.00	79.90	N
ATOM	1564	CA	ILE A 320	62.123	65.194	14.271	1.00	81.47	C
ATOM	1565	C	ILE A 320	61.255	65.828	15.362	1.00	82.10	C
ATOM	1566	O	ILE A 320	60.147	66.298	15.096	1.00	82.35	O
ATOM	1567	CB	ILE A 320	61.776	65.850	12.911	1.00	81.84	C
ATOM	1568	CG1	ILE A 320	62.556	65.162	11.787	1.00	82.02	C
ATOM	1569	CG2	ILE A 320	62.121	67.340	12.946	1.00	82.15	C
ATOM	1570	CD1	ILE A 320	62.212	65.669	10.396	1.00	82.11	C
ATOM	1571	N	THR A 321	61.775	65.841	16.587	1.00	82.35	N
ATOM	1572	CA	THR A 321	61.072	66.403	17.738	1.00	82.60	C
ATOM	1573	C	THR A 321	60.461	67.782	17.469	1.00	82.30	C
ATOM	1574	O	THR A 321	59.253	67.975	17.619	1.00	81.76	O
ATOM	1575	CB	THR A 321	62.019	66.527	18.949	1.00	82.94	C
ATOM	1576	OG1	THR A 321	62.607	65.250	19.232	1.00	83.54	O
ATOM	1577	CG2	THR A 321	61.257	67.016	20.167	1.00	82.53	C
ATOM	1578	N	ARG A 322	61.306	68.735	17.083	1.00	82.27	N
ATOM	1579	CA	ARG A 322	60.863	70.099	16.800	1.00	82.39	C
ATOM	1580	C	ARG A 322	59.651	70.172	15.878	1.00	81.93	C
ATOM	1581	O	ARG A 322	58.611	70.714	16.254	1.00	81.88	O
ATOM	1582	CB	ARG A 322	62.005	70.915	16.191	1.00	83.09	C
ATOM	1583	CG	ARG A 322	63.009	71.456	17.199	1.00	83.95	C
ATOM	1584	CD	ARG A 322	63.963	72.423	16.516	1.00	84.72	C
ATOM	1585	NE	ARG A 322	64.729	73.227	17.464	1.00	85.49	N
ATOM	1586	CZ	ARG A 322	65.543	74.218	17.108	1.00	85.83	C
ATOM	1587	NH1	ARG A 322	65.696	74.526	15.824	1.00	85.76	N
ATOM	1588	NH2	ARG A 322	66.203	74.903	18.032	1.00	85.80	N
ATOM	1589	N	GLU A 323	59.791	69.634	14.668	1.00	81.06	N
ATOM	1590	CA	GLU A 323	58.699	69.643	13.697	1.00	80.15	C
ATOM	1591	C	GLU A 323	57.547	68.739	14.131	1.00	78.66	C



TABLE 6

ATOM	1592	O	GLU A 323	56.713	68.343	13.313	1.00	78.92	O
ATOM	1593	CB	GLU A 323	59.205	69.192	12.324	1.00	81.16	C
ATOM	1594	CG	GLU A 323	60.194	70.145	11.677	1.00	83.13	C
ATOM	1595	CD	GLU A 323	60.632	69.676	10.302	1.00	84.05	C
ATOM	1596	OE1	GLU A 323	61.266	68.602	10.212	1.00	84.52	O
ATOM	1597	OE2	GLU A 323	60.337	70.381	9.312	1.00	84.85	O
ATOM	1598	N	GLN A 324	57.500	68.420	15.421	1.00	76.17	N
ATOM	1599	CA	GLN A 324	56.451	67.559	15.947	1.00	73.65	C
ATOM	1600	C	GLN A 324	55.768	68.105	17.202	1.00	70.58	C
ATOM	1601	O	GLN A 324	55.066	69.117	17.147	1.00	70.75	O
ATOM	1602	CB	GLN A 324	57.019	66.160	16.218	1.00	76.03	C
ATOM	1603	CG	GLN A 324	57.091	65.267	14.980	1.00	78.70	C
ATOM	1604	CD	GLN A 324	58.247	64.274	15.029	1.00	80.71	C
ATOM	1605	OE1	GLN A 324	58.488	63.623	16.050	1.00	81.60	O
ATOM	1606	NE2	GLN A 324	58.964	64.150	13.913	1.00	81.50	N
ATOM	1607	N	LYS A 325	55.987	67.439	18.331	1.00	66.07	N
ATOM	1608	CA	LYS A 325	55.358	67.823	19.588	1.00	61.45	C
ATOM	1609	C	LYS A 325	56.260	68.589	20.549	1.00	57.60	C
ATOM	1610	O	LYS A 325	55.778	69.239	21.479	1.00	56.87	O
ATOM	1611	CB	LYS A 325	54.817	66.566	20.274	1.00	62.25	C
ATOM	1612	CG	LYS A 325	53.832	65.795	19.402	1.00	63.17	C
ATOM	1613	CD	LYS A 325	53.889	64.295	19.660	1.00	63.20	C
ATOM	1614	CE	LYS A 325	53.295	63.928	20.999	1.00	62.14	C
ATOM	1615	NZ	LYS A 325	51.844	64.232	21.055	1.00	62.08	N
ATOM	1616	N	GLY A 326	57.566	68.515	20.335	1.00	52.89	N
ATOM	1617	CA	GLY A 326	58.468	69.220	21.222	1.00	48.72	C
ATOM	1618	C	GLY A 326	58.716	68.493	22.534	1.00	45.75	C
ATOM	1619	O	GLY A 326	58.952	69.129	23.557	1.00	44.02	O
ATOM	1620	N	ILE A 327	58.639	67.164	22.510	1.00	42.92	N
ATOM	1621	CA	ILE A 327	58.901	66.362	23.698	1.00	41.83	C
ATOM	1622	C	ILE A 327	60.222	65.632	23.463	1.00	40.05	C
ATOM	1623	O	ILE A 327	60.573	65.316	22.329	1.00	39.48	O
ATOM	1624	CB	ILE A 327	57.777	65.310	23.974	1.00	42.64	C
ATOM	1625	CG1	ILE A 327	57.577	64.408	22.754	1.00	44.04	C
ATOM	1626	CG2	ILE A 327	56.470	66.012	24.333	1.00	42.95	C
ATOM	1627	CD1	ILE A 327	56.582	63.261	22.982	1.00	46.03	C
ATOM	1628	N	GLY A 328	60.964	65.374	24.528	1.00	38.80	N
ATOM	1629	CA	GLY A 328	62.223	64.681	24.360	1.00	37.90	C
ATOM	1630	C	GLY A 328	63.289	65.133	25.334	1.00	36.87	C
ATOM	1631	O	GLY A 328	63.041	65.973	26.206	1.00	35.37	O
ATOM	1632	N	ARG A 329	64.484	64.573	25.175	1.00	34.44	N
ATOM	1633	CA	ARG A 329	65.602	64.901	26.042	1.00	32.91	C
ATOM	1634	C	ARG A 329	66.872	64.373	25.389	1.00	32.38	C
ATOM	1635	O	ARG A 329	66.826	63.365	24.689	1.00	32.32	O
ATOM	1636	CB	ARG A 329	65.395	64.239	27.410	1.00	32.23	C
ATOM	1637	CG	ARG A 329	66.233	64.822	28.530	1.00	31.22	C
ATOM	1638	CD	ARG A 329	66.062	64.023	29.813	1.00	31.90	C
ATOM	1639	NE	ARG A 329	66.413	64.807	30.991	1.00	30.70	N
ATOM	1640	CZ	ARG A 329	66.373	64.344	32.235	1.00	33.01	C
ATOM	1641	NH1	ARG A 329	66.002	63.093	32.469	1.00	32.08	N
ATOM	1642	NH2	ARG A 329	66.692	65.139	33.249	1.00	32.28	N
ATOM	1643	N	GLY A 330	67.999	65.058	25.592	1.00	31.61	N
ATOM	1644	CA	GLY A 330	69.245	64.582	25.012	1.00	29.56	C
ATOM	1645	C	GLY A 330	69.431	63.148	25.481	1.00	29.63	C
ATOM	1646	O	GLY A 330	69.267	62.861	26.666	1.00	29.00	O
ATOM	1647	N	GLN A 331	69.775	62.253	24.563	1.00	29.35	N
ATOM	1648	CA	GLN A 331	69.936	60.839	24.880	1.00	29.79	C

TABLE 6

ATOM	1649	C	GLN A 331	70.913	60.538	26.021	1.00	30.69	C
ATOM	1650	O	GLN A 331	70.644	59.654	26.840	1.00	30.62	O
ATOM	1651	CB	GLN A 331	70.348	60.057	23.625	1.00	29.75	C
ATOM	1652	CG	GLN A 331	70.254	58.531	23.781	1.00	31.50	C
ATOM	1653	CD	GLN A 331	68.822	58.039	23.959	1.00	33.75	C
ATOM	1654	OE1	GLN A 331	68.590	56.903	24.387	1.00	35.72	O
ATOM	1655	NE2	GLN A 331	67.858	58.885	23.623	1.00	30.84	N
ATOM	1656	N	ALA A 332	72.039	61.254	26.078	1.00	28.60	N
ATOM	1657	CA	ALA A 332	73.017	61.020	27.142	1.00	29.13	C
ATOM	1658	C	ALA A 332	72.422	61.330	28.513	1.00	28.73	C
ATOM	1659	O	ALA A 332	72.495	60.513	29.437	1.00	28.92	O
ATOM	1660	CB	ALA A 332	74.281	61.873	26.912	1.00	29.21	C
ATOM	1661	N	THR A 333	71.833	62.513	28.639	1.00	26.69	N
ATOM	1662	CA	THR A 333	71.229	62.933	29.893	1.00	27.66	C
ATOM	1663	C	THR A 333	70.126	61.968	30.321	1.00	27.96	C
ATOM	1664	O	THR A 333	70.017	61.619	31.496	1.00	27.38	O
ATOM	1665	CB	THR A 333	70.643	64.347	29.770	1.00	28.02	C
ATOM	1666	OG1	THR A 333	71.681	65.249	29.359	1.00	27.47	O
ATOM	1667	CG2	THR A 333	70.066	64.804	31.121	1.00	28.00	C
ATOM	1668	N	ALA A 334	69.317	61.534	29.361	1.00	27.55	N
ATOM	1669	CA	ALA A 334	68.236	60.596	29.642	1.00	27.85	C
ATOM	1670	C	ALA A 334	68.795	59.294	30.219	1.00	27.98	C
ATOM	1671	O	ALA A 334	68.318	58.792	31.238	1.00	28.76	O
ATOM	1672	CB	ALA A 334	67.448	60.309	28.362	1.00	26.67	C
ATOM	1673	N	VAL A 335	69.809	58.745	29.562	1.00	29.11	N
ATOM	1674	CA	VAL A 335	70.416	57.499	30.011	1.00	29.37	C
ATOM	1675	C	VAL A 335	71.009	57.652	31.411	1.00	29.55	C
ATOM	1676	O	VAL A 335	70.721	56.856	32.311	1.00	28.49	O
ATOM	1677	CB	VAL A 335	71.524	57.039	29.033	1.00	30.52	C
ATOM	1678	CG1	VAL A 335	72.291	55.859	29.622	1.00	31.70	C
ATOM	1679	CG2	VAL A 335	70.904	56.644	27.701	1.00	30.54	C
ATOM	1680	N	ILE A 336	71.823	58.686	31.592	1.00	29.23	N
ATOM	1681	CA	ILE A 336	72.464	58.938	32.878	1.00	28.94	C
ATOM	1682	C	ILE A 336	71.450	59.063	34.013	1.00	30.36	C
ATOM	1683	O	ILE A 336	71.652	58.525	35.109	1.00	28.57	O
ATOM	1684	CB	ILE A 336	73.325	60.216	32.813	1.00	28.69	C
ATOM	1685	CG1	ILE A 336	74.531	59.974	31.898	1.00	27.72	C
ATOM	1686	CG2	ILE A 336	73.768	60.630	34.211	1.00	24.85	C
ATOM	1687	CD1	ILE A 336	75.352	61.229	31.609	1.00	29.74	C
ATOM	1688	N	ASP A 337	70.351	59.761	33.743	1.00	30.78	N
ATOM	1689	CA	ASP A 337	69.312	59.964	34.746	1.00	30.67	C
ATOM	1690	C	ASP A 337	68.563	58.662	35.065	1.00	30.77	C
ATOM	1691	O	ASP A 337	68.358	58.320	36.229	1.00	29.22	O
ATOM	1692	CB	ASP A 337	68.325	61.018	34.250	1.00	33.77	C
ATOM	1693	CG	ASP A 337	67.287	61.373	35.285	1.00	35.46	C
ATOM	1694	OD1	ASP A 337	66.180	61.806	34.897	1.00	36.96	O
ATOM	1695	OD2	ASP A 337	67.581	61.228	36.488	1.00	38.65	O
ATOM	1696	N	VAL A 338	68.152	57.941	34.027	1.00	30.12	N
ATOM	1697	CA	VAL A 338	67.427	56.693	34.217	1.00	29.17	C
ATOM	1698	C	VAL A 338	68.289	55.663	34.935	1.00	30.19	C
ATOM	1699	O	VAL A 338	67.808	54.963	35.829	1.00	29.30	O
ATOM	1700	CB	VAL A 338	66.947	56.103	32.865	1.00	29.20	C
ATOM	1701	CG1	VAL A 338	66.423	54.683	33.068	1.00	26.29	C
ATOM	1702	CG2	VAL A 338	65.845	56.986	32.277	1.00	27.28	C
ATOM	1703	N	VAL A 339	69.556	55.572	34.535	1.00	28.08	N
ATOM	1704	CA	VAL A 339	70.489	54.636	35.147	1.00	29.13	C
ATOM	1705	C	VAL A 339	70.653	54.889	36.648	1.00	30.51	C

ATOM	1706	O	VAL	A	339	70.731	53.943	37.432	1.00	31.60	O
ATOM	1707	CB	VAL	A	339	71.874	54.710	34.457	1.00	29.06	C
ATOM	1708	CG1	VAL	A	339	72.931	54.010	35.302	1.00	27.64	C
ATOM	1709	CG2	VAL	A	339	71.789	54.062	33.070	1.00	27.50	C
ATOM	1710	N	ALA	A	340	70.708	56.158	37.048	1.00	30.84	N
ATOM	1711	CA	ALA	A	340	70.851	56.490	38.463	1.00	31.17	C
ATOM	1712	C	ALA	A	340	69.610	56.014	39.211	1.00	31.63	C
ATOM	1713	O	ALA	A	340	69.701	55.469	40.313	1.00	32.08	O
ATOM	1714	CB	ALA	A	340	71.028	57.999	38.644	1.00	30.25	C
ATOM	1715	N	GLU	A	341	68.448	56.215	38.601	1.00	31.19	N
ATOM	1716	CA	GLU	A	341	67.196	55.810	39.225	1.00	31.45	C
ATOM	1717	C	GLU	A	341	67.138	54.290	39.301	1.00	31.09	C
ATOM	1718	O	GLU	A	341	66.702	53.730	40.305	1.00	30.16	O
ATOM	1719	CB	GLU	A	341	66.006	56.334	38.419	1.00	31.78	C
ATOM	1720	CG	GLU	A	341	64.668	56.257	39.149	1.00	34.04	C
ATOM	1721	CD	GLU	A	341	64.611	57.177	40.362	1.00	37.16	C
ATOM	1722	OE1	GLU	A	341	65.211	58.273	40.313	1.00	38.31	O
ATOM	1723	OE2	GLU	A	341	63.954	56.816	41.358	1.00	37.63	O
ATOM	1724	N	ARG	A	342	67.578	53.634	38.232	1.00	30.40	N
ATOM	1725	CA	ARG	A	342	67.585	52.177	38.170	1.00	31.42	C
ATOM	1726	C	ARG	A	342	68.469	51.616	39.286	1.00	31.57	C
ATOM	1727	O	ARG	A	342	68.099	50.646	39.937	1.00	32.09	O
ATOM	1728	CB	ARG	A	342	68.086	51.709	36.791	1.00	31.10	C
ATOM	1729	CG	ARG	A	342	68.037	50.192	36.542	1.00	28.82	C
ATOM	1730	CD	ARG	A	342	69.284	49.477	37.069	1.00	28.26	C
ATOM	1731	NE	ARG	A	342	70.531	49.919	36.441	1.00	26.03	N
ATOM	1732	CZ	ARG	A	342	70.871	49.696	35.172	1.00	26.57	C
ATOM	1733	NH1	ARG	A	342	70.060	49.035	34.360	1.00	25.10	N
ATOM	1734	NH2	ARG	A	342	72.043	50.120	34.714	1.00	26.92	N
ATOM	1735	N	ASN	A	343	69.626	52.236	39.508	1.00	31.96	N
ATOM	1736	CA	ASN	A	343	70.537	51.788	40.557	1.00	33.03	C
ATOM	1737	C	ASN	A	343	69.943	52.031	41.946	1.00	34.72	C
ATOM	1738	O	ASN	A	343	70.122	51.220	42.854	1.00	35.11	O
ATOM	1739	CB	ASN	A	343	71.898	52.478	40.418	1.00	31.35	C
ATOM	1740	CG	ASN	A	343	72.651	52.020	39.176	1.00	32.01	C
ATOM	1741	OD1	ASN	A	343	72.335	50.976	38.604	1.00	31.68	O
ATOM	1742	ND2	ASN	A	343	73.657	52.786	38.765	1.00	29.30	N
ATOM	1743	N	LYS	A	344	69.229	53.141	42.107	1.00	36.02	N
ATOM	1744	CA	LYS	A	344	68.587	53.446	43.378	1.00	38.22	C
ATOM	1745	C	LYS	A	344	67.512	52.384	43.615	1.00	37.85	C
ATOM	1746	O	LYS	A	344	67.392	51.834	44.709	1.00	39.02	O
ATOM	1747	CB	LYS	A	344	67.942	54.837	43.338	1.00	40.96	C
ATOM	1748	CG	LYS	A	344	67.139	55.177	44.589	1.00	46.89	C
ATOM	1749	CD	LYS	A	344	66.252	56.412	44.393	1.00	51.33	C
ATOM	1750	CE	LYS	A	344	67.040	57.709	44.454	1.00	54.56	C
ATOM	1751	NZ	LYS	A	344	67.416	58.052	45.862	1.00	58.14	N
ATOM	1752	N	TYR	A	345	66.744	52.092	42.573	1.00	37.18	N
ATOM	1753	CA	TYR	A	345	65.679	51.098	42.639	1.00	36.37	C
ATOM	1754	C	TYR	A	345	66.223	49.722	43.031	1.00	37.15	C
ATOM	1755	O	TYR	A	345	65.615	49.009	43.827	1.00	36.61	O
ATOM	1756	CB	TYR	A	345	64.987	50.991	41.287	1.00	35.78	C
ATOM	1757	CG	TYR	A	345	63.677	50.235	41.321	1.00	37.12	C
ATOM	1758	CD1	TYR	A	345	62.506	50.863	41.736	1.00	36.58	C
ATOM	1759	CD2	TYR	A	345	63.600	48.905	40.906	1.00	35.92	C
ATOM	1760	CE1	TYR	A	345	61.294	50.196	41.731	1.00	37.36	C
ATOM	1761	CE2	TYR	A	345	62.385	48.223	40.897	1.00	37.19	C
ATOM	1762	CZ	TYR	A	345	61.238	48.880	41.309	1.00	37.67	C

TABLE 6

ATOM	1763	OH	TYR	A	345	60.025	48.240	41.280	1.00	39.76	O
ATOM	1764	N	PHE	A	346	67.359	49.346	42.452	1.00	37.41	N
ATOM	1765	CA	PHE	A	346	67.986	48.064	42.759	1.00	38.71	C
ATOM	1766	C	PHE	A	346	68.354	47.996	44.244	1.00	39.07	C
ATOM	1767	O	PHE	A	346	68.162	46.969	44.889	1.00	38.25	O
ATOM	1768	CB	PHE	A	346	69.251	47.869	41.915	1.00	37.92	C
ATOM	1769	CG	PHE	A	346	70.018	46.621	42.252	1.00	39.35	C
ATOM	1770	CD1	PHE	A	346	69.484	45.362	41.984	1.00	38.94	C
ATOM	1771	CD2	PHE	A	346	71.277	46.703	42.841	1.00	41.21	C
ATOM	1772	CE1	PHE	A	346	70.190	44.203	42.294	1.00	39.83	C
ATOM	1773	CE2	PHE	A	346	71.997	45.545	43.159	1.00	41.80	C
ATOM	1774	CZ	PHE	A	346	71.449	44.292	42.883	1.00	41.67	C
ATOM	1775	N	GLU	A	347	68.877	49.096	44.778	1.00	40.05	N
ATOM	1776	CA	GLU	A	347	69.269	49.150	46.183	1.00	42.73	C
ATOM	1777	C	GLU	A	347	68.091	49.066	47.147	1.00	42.82	C
ATOM	1778	O	GLU	A	347	68.227	48.534	48.249	1.00	43.20	O
ATOM	1779	CB	GLU	A	347	70.061	50.429	46.472	1.00	43.65	C
ATOM	1780	CG	GLU	A	347	71.410	50.480	45.778	1.00	50.82	C
ATOM	1781	CD	GLU	A	347	72.321	49.322	46.176	1.00	54.96	C
ATOM	1782	OE1	GLU	A	347	73.405	49.177	45.565	1.00	57.64	O
ATOM	1783	OE2	GLU	A	347	71.961	48.556	47.101	1.00	57.77	O
ATOM	1784	N	GLU	A	348	66.940	49.582	46.731	1.00	41.38	N
ATOM	1785	CA	GLU	A	348	65.760	49.574	47.580	1.00	42.21	C
ATOM	1786	C	GLU	A	348	64.987	48.265	47.522	1.00	41.45	C
ATOM	1787	O	GLU	A	348	64.437	47.821	48.526	1.00	41.84	O
ATOM	1788	CB	GLU	A	348	64.800	50.705	47.178	1.00	43.87	C
ATOM	1789	CG	GLU	A	348	65.481	52.020	46.833	1.00	47.35	C
ATOM	1790	CD	GLU	A	348	64.505	53.097	46.375	1.00	49.04	C
ATOM	1791	OE1	GLU	A	348	63.565	52.781	45.611	1.00	47.83	O
ATOM	1792	OE2	GLU	A	348	64.694	54.268	46.773	1.00	51.17	O
ATOM	1793	N	THR	A	349	64.954	47.645	46.349	1.00	40.08	N
ATOM	1794	CA	THR	A	349	64.171	46.432	46.159	1.00	37.91	C
ATOM	1795	C	THR	A	349	64.910	45.133	45.859	1.00	37.79	C
ATOM	1796	O	THR	A	349	64.306	44.062	45.895	1.00	37.84	O
ATOM	1797	CB	THR	A	349	63.173	46.639	45.020	1.00	37.46	C
ATOM	1798	OG1	THR	A	349	63.894	46.724	43.784	1.00	37.27	O
ATOM	1799	CG2	THR	A	349	62.387	47.933	45.223	1.00	36.70	C
ATOM	1800	N	GLY	A	350	66.197	45.216	45.550	1.00	37.03	N
ATOM	1801	CA	GLY	A	350	66.940	44.014	45.215	1.00	36.78	C
ATOM	1802	C	GLY	A	350	66.646	43.568	43.787	1.00	36.94	C
ATOM	1803	O	GLY	A	350	67.115	42.520	43.340	1.00	37.38	O
ATOM	1804	N	ILE	A	351	65.863	44.362	43.061	1.00	34.88	N
ATOM	1805	CA	ILE	A	351	65.515	44.027	41.683	1.00	33.79	C
ATOM	1806	C	ILE	A	351	66.368	44.835	40.708	1.00	32.41	C
ATOM	1807	O	ILE	A	351	66.378	46.061	40.765	1.00	31.22	O
ATOM	1808	CB	ILE	A	351	64.043	44.357	41.381	1.00	36.04	C
ATOM	1809	CG1	ILE	A	351	63.125	43.668	42.391	1.00	36.61	C
ATOM	1810	CG2	ILE	A	351	63.706	43.948	39.948	1.00	35.73	C
ATOM	1811	CD1	ILE	A	351	61.686	44.165	42.331	1.00	37.65	C
ATOM	1812	N	TYR	A	352	67.078	44.153	39.817	1.00	32.08	N
ATOM	1813	CA	TYR	A	352	67.904	44.843	38.835	1.00	32.62	C
ATOM	1814	C	TYR	A	352	67.177	44.844	37.493	1.00	33.29	C
ATOM	1815	O	TYR	A	352	66.953	43.791	36.904	1.00	33.54	O
ATOM	1816	CB	TYR	A	352	69.264	44.158	38.666	1.00	31.31	C
ATOM	1817	CG	TYR	A	352	70.174	44.889	37.695	1.00	30.97	C
ATOM	1818	CD1	TYR	A	352	70.998	45.930	38.128	1.00	29.66	C
ATOM	1819	CD2	TYR	A	352	70.171	44.575	36.336	1.00	30.63	C

TABLE 6

ATOM	1820	CE1	TYR	A	352	71.794	46.638	37.237	1.00	28.10	C
ATOM	1821	CE2	TYR	A	352	70.966	45.280	35.434	1.00	30.54	C
ATOM	1822	CZ	TYR	A	352	71.775	46.309	35.895	1.00	29.18	C
ATOM	1823	OH	TYR	A	352	72.580	46.996	35.019	1.00	31.65	O
ATOM	1824	N	ILE	A	353	66.811	46.027	37.010	1.00	32.84	N
ATOM	1825	CA	ILE	A	353	66.113	46.119	35.735	1.00	31.85	C
ATOM	1826	C	ILE	A	353	67.028	46.626	34.634	1.00	31.84	C
ATOM	1827	O	ILE	A	353	67.506	47.760	34.679	1.00	32.46	O
ATOM	1828	CB	ILE	A	353	64.900	47.048	35.835	1.00	32.61	C
ATOM	1829	CG1	ILE	A	353	63.962	46.536	36.936	1.00	34.08	C
ATOM	1830	CG2	ILE	A	353	64.181	47.105	34.487	1.00	33.22	C
ATOM	1831	CD1	ILE	A	353	62.793	47.431	37.244	1.00	32.45	C
ATOM	1832	N	PRO	A	354	67.303	45.779	33.634	1.00	30.90	N
ATOM	1833	CA	PRO	A	354	68.177	46.197	32.533	1.00	29.68	C
ATOM	1834	C	PRO	A	354	67.528	47.344	31.763	1.00	29.05	C
ATOM	1835	O	PRO	A	354	66.308	47.368	31.600	1.00	28.14	O
ATOM	1836	CB	PRO	A	354	68.293	44.934	31.679	1.00	28.34	C
ATOM	1837	CG	PRO	A	354	68.051	43.808	32.680	1.00	29.10	C
ATOM	1838	CD	PRO	A	354	66.921	44.360	33.506	1.00	29.33	C
ATOM	1839	N	VAL	A	355	68.330	48.302	31.301	1.00	28.33	N
ATOM	1840	CA	VAL	A	355	67.771	49.404	30.529	1.00	27.79	C
ATOM	1841	C	VAL	A	355	68.406	49.446	29.151	1.00	27.36	C
ATOM	1842	O	VAL	A	355	69.552	49.044	28.958	1.00	26.70	O
ATOM	1843	CB	VAL	A	355	67.931	50.788	31.246	1.00	28.56	C
ATOM	1844	CG1	VAL	A	355	67.191	50.759	32.584	1.00	27.11	C
ATOM	1845	CG2	VAL	A	355	69.406	51.147	31.427	1.00	24.91	C
ATOM	1846	N	CYS	A	356	67.640	49.941	28.193	1.00	26.85	N
ATOM	1847	CA	CYS	A	356	68.075	50.008	26.813	1.00	27.44	C
ATOM	1848	C	CYS	A	356	68.148	51.436	26.298	1.00	27.62	C
ATOM	1849	O	CYS	A	356	67.170	52.177	26.385	1.00	28.60	O
ATOM	1850	CB	CYS	A	356	67.099	49.198	25.945	1.00	28.37	C
ATOM	1851	SG	CYS	A	356	67.313	49.376	24.155	1.00	31.02	S
ATOM	1852	N	SER	A	357	69.305	51.826	25.770	1.00	27.52	N
ATOM	1853	CA	SER	A	357	69.455	53.160	25.196	1.00	28.11	C
ATOM	1854	C	SER	A	357	68.975	52.992	23.756	1.00	28.62	C
ATOM	1855	O	SER	A	357	69.628	52.323	22.948	1.00	28.65	O
ATOM	1856	CB	SER	A	357	70.916	53.610	25.210	1.00	27.16	C
ATOM	1857	OG	SER	A	357	71.045	54.894	24.615	1.00	28.40	O
ATOM	1858	N	ASP	A	358	67.831	53.594	23.451	1.00	29.11	N
ATOM	1859	CA	ASP	A	358	67.215	53.487	22.124	1.00	30.39	C
ATOM	1860	C	ASP	A	358	67.269	54.773	21.294	1.00	30.74	C
ATOM	1861	O	ASP	A	358	66.604	55.758	21.608	1.00	29.70	O
ATOM	1862	CB	ASP	A	358	65.762	53.019	22.305	1.00	29.62	C
ATOM	1863	CG	ASP	A	358	64.978	52.960	21.007	1.00	30.36	C
ATOM	1864	OD1	ASP	A	358	65.580	52.835	19.920	1.00	31.20	O
ATOM	1865	OD2	ASP	A	358	63.734	53.022	21.086	1.00	30.14	O
ATOM	1866	N	GLY	A	359	68.081	54.751	20.240	1.00	33.56	N
ATOM	1867	CA	GLY	A	359	68.193	55.899	19.357	1.00	35.42	C
ATOM	1868	C	GLY	A	359	69.310	56.878	19.659	1.00	38.10	C
ATOM	1869	O	GLY	A	359	69.854	56.901	20.761	1.00	39.07	O
ATOM	1870	N	GLY	A	360	69.662	57.681	18.659	1.00	40.00	N
ATOM	1871	CA	GLY	A	360	70.706	58.673	18.831	1.00	41.21	C
ATOM	1872	C	GLY	A	360	72.123	58.198	18.581	1.00	41.96	C
ATOM	1873	O	GLY	A	360	73.055	58.987	18.695	1.00	44.15	O
ATOM	1874	N	ILE	A	361	72.305	56.923	18.256	1.00	42.76	N
ATOM	1875	CA	ILE	A	361	73.646	56.410	17.996	1.00	43.52	C
ATOM	1876	C	ILE	A	361	74.052	56.802	16.581	1.00	44.42	C

TABLE 6

ATOM	1877	O	ILE A 361	73.470	56.322	15.609	1.00	44.27	O
ATOM	1878	CB	ILE A 361	73.714	54.862	18.107	1.00	43.69	C
ATOM	1879	CG1	ILE A 361	73.392	54.412	19.538	1.00	43.46	C
ATOM	1880	CG2	ILE A 361	75.095	54.366	17.685	1.00	42.46	C
ATOM	1881	CD1	ILE A 361	74.429	54.792	20.565	1.00	42.32	C
ATOM	1882	N	VAL A 362	75.049	57.675	16.469	1.00	45.42	N
ATOM	1883	CA	VAL A 362	75.529	58.118	15.166	1.00	45.68	C
ATOM	1884	C	VAL A 362	76.851	57.440	14.820	1.00	45.91	C
ATOM	1885	O	VAL A 362	77.035	56.969	13.696	1.00	46.38	O
ATOM	1886	CB	VAL A 362	75.723	59.643	15.135	1.00	46.35	C
ATOM	1887	CG1	VAL A 362	76.105	60.091	13.727	1.00	48.19	C
ATOM	1888	CG2	VAL A 362	74.444	60.333	15.572	1.00	46.73	C
ATOM	1889	N	TYR A 363	77.761	57.379	15.792	1.00	44.38	N
ATOM	1890	CA	TYR A 363	79.067	56.759	15.589	1.00	43.12	C
ATOM	1891	C	TYR A 363	79.278	55.547	16.491	1.00	41.17	C
ATOM	1892	O	TYR A 363	78.599	55.387	17.501	1.00	40.86	O
ATOM	1893	CB	TYR A 363	80.176	57.771	15.862	1.00	46.18	C
ATOM	1894	CG	TYR A 363	80.072	59.040	15.052	1.00	49.95	C
ATOM	1895	CD1	TYR A 363	80.052	59.001	13.659	1.00	52.89	C
ATOM	1896	CD2	TYR A 363	80.012	60.283	15.677	1.00	51.68	C
ATOM	1897	CE1	TYR A 363	79.978	60.171	12.905	1.00	55.23	C
ATOM	1898	CE2	TYR A 363	79.938	61.462	14.934	1.00	54.25	C
ATOM	1899	CZ	TYR A 363	79.924	61.397	13.549	1.00	55.42	C
ATOM	1900	OH	TYR A 363	79.872	62.556	12.803	1.00	58.12	O
ATOM	1901	N	ASP A 364	80.231	54.695	16.134	1.00	39.35	N
ATOM	1902	CA	ASP A 364	80.507	53.523	16.953	1.00	38.37	C
ATOM	1903	C	ASP A 364	80.828	53.907	18.396	1.00	36.34	C
ATOM	1904	O	ASP A 364	80.378	53.245	19.331	1.00	37.10	O
ATOM	1905	CB	ASP A 364	81.681	52.712	16.386	1.00	40.35	C
ATOM	1906	CG	ASP A 364	81.347	52.031	15.068	1.00	41.28	C
ATOM	1907	OD1	ASP A 364	80.207	51.547	14.912	1.00	39.82	O
ATOM	1908	OD2	ASP A 364	82.236	51.964	14.197	1.00	42.22	O
ATOM	1909	N	TYR A 365	81.594	54.978	18.587	1.00	33.88	N
ATOM	1910	CA	TYR A 365	81.959	55.375	19.945	1.00	33.29	C
ATOM	1911	C	TYR A 365	80.754	55.781	20.792	1.00	31.98	C
ATOM	1912	O	TYR A 365	80.827	55.776	22.016	1.00	30.93	O
ATOM	1913	CB	TYR A 365	83.031	56.477	19.926	1.00	32.04	C
ATOM	1914	CG	TYR A 365	82.536	57.903	19.814	1.00	35.20	C
ATOM	1915	CD1	TYR A 365	82.298	58.677	20.954	1.00	34.49	C
ATOM	1916	CD2	TYR A 365	82.362	58.501	18.567	1.00	35.46	C
ATOM	1917	CE1	TYR A 365	81.905	60.016	20.849	1.00	36.12	C
ATOM	1918	CE2	TYR A 365	81.971	59.837	18.452	1.00	37.53	C
ATOM	1919	CZ	TYR A 365	81.744	60.586	19.594	1.00	37.51	C
ATOM	1920	OH	TYR A 365	81.351	61.901	19.461	1.00	40.00	O
ATOM	1921	N	HIS A 366	79.641	56.119	20.143	1.00	31.70	N
ATOM	1922	CA	HIS A 366	78.434	56.467	20.882	1.00	32.08	C
ATOM	1923	C	HIS A 366	77.938	55.198	21.591	1.00	30.99	C
ATOM	1924	O	HIS A 366	77.289	55.278	22.635	1.00	30.53	O
ATOM	1925	CB	HIS A 366	77.336	57.002	19.947	1.00	32.20	C
ATOM	1926	CG	HIS A 366	77.597	58.378	19.422	1.00	33.31	C
ATOM	1927	ND1	HIS A 366	78.598	59.190	19.914	1.00	34.60	N
ATOM	1928	CD2	HIS A 366	76.948	59.110	18.485	1.00	33.99	C
ATOM	1929	CE1	HIS A 366	78.552	60.362	19.305	1.00	32.63	C
ATOM	1930	NE2	HIS A 366	77.560	60.339	18.434	1.00	35.91	N
ATOM	1931	N	MET A 367	78.244	54.031	21.017	1.00	30.17	N
ATOM	1932	CA	MET A 367	77.853	52.748	21.619	1.00	30.37	C
ATOM	1933	C	MET A 367	78.588	52.573	22.953	1.00	29.75	C

TABLE 6

ATOM	1934	O	MET A 367	77.997	52.214	23.967	1.00	31.07	O
ATOM	1935	CB	MET A 367	78.232	51.567	20.711	1.00	30.58	C
ATOM	1936	CG	MET A 367	77.477	51.457	19.385	1.00	31.52	C
ATOM	1937	SD	MET A 367	78.053	50.007	18.447	1.00	35.95	S
ATOM	1938	CE	MET A 367	77.121	50.189	16.917	1.00	34.32	C
ATOM	1939	N	THR A 368	79.894	52.810	22.928	1.00	29.18	N
ATOM	1940	CA	THR A 368	80.726	52.688	24.118	1.00	29.61	C
ATOM	1941	C	THR A 368	80.241	53.682	25.165	1.00	28.28	C
ATOM	1942	O	THR A 368	80.163	53.354	26.343	1.00	29.90	O
ATOM	1943	CB	THR A 368	82.196	52.974	23.775	1.00	29.95	C
ATOM	1944	OG1	THR A 368	82.548	52.222	22.606	1.00	31.91	O
ATOM	1945	CG2	THR A 368	83.113	52.574	24.928	1.00	28.50	C
ATOM	1946	N	LEU A 369	79.916	54.895	24.729	1.00	28.13	N
ATOM	1947	CA	LEU A 369	79.418	55.925	25.639	1.00	29.19	C
ATOM	1948	C	LEU A 369	78.117	55.493	26.321	1.00	28.58	C
ATOM	1949	O	LEU A 369	77.978	55.619	27.535	1.00	28.56	O
ATOM	1950	CB	LEU A 369	79.165	57.245	24.890	1.00	29.00	C
ATOM	1951	CG	LEU A 369	80.362	58.150	24.593	1.00	30.35	C
ATOM	1952	CD1	LEU A 369	79.877	59.404	23.866	1.00	30.34	C
ATOM	1953	CD2	LEU A 369	81.064	58.528	25.898	1.00	28.91	C
ATOM	1954	N	ALA A 370	77.172	54.990	25.529	1.00	28.37	N
ATOM	1955	CA	ALA A 370	75.880	54.560	26.052	1.00	28.93	C
ATOM	1956	C	ALA A 370	76.052	53.464	27.103	1.00	27.87	C
ATOM	1957	O	ALA A 370	75.424	53.500	28.152	1.00	28.49	O
ATOM	1958	CB	ALA A 370	74.987	54.064	24.911	1.00	26.15	C
ATOM	1959	N	LEU A 371	76.905	52.491	26.813	1.00	27.99	N
ATOM	1960	CA	LEU A 371	77.146	51.401	27.746	1.00	28.20	C
ATOM	1961	C	LEU A 371	77.852	51.935	28.995	1.00	28.01	C
ATOM	1962	O	LEU A 371	77.475	51.599	30.111	1.00	27.43	O
ATOM	1963	CB	LEU A 371	77.992	50.309	27.069	1.00	27.75	C
ATOM	1964	CG	LEU A 371	77.347	49.632	25.844	1.00	29.75	C
ATOM	1965	CD1	LEU A 371	78.370	48.736	25.140	1.00	31.88	C
ATOM	1966	CD2	LEU A 371	76.140	48.815	26.272	1.00	29.40	C
ATOM	1967	N	ALA A 372	78.863	52.783	28.803	1.00	27.59	N
ATOM	1968	CA	ALA A 372	79.608	53.346	29.923	1.00	27.55	C
ATOM	1969	C	ALA A 372	78.710	54.146	30.845	1.00	28.89	C
ATOM	1970	O	ALA A 372	78.913	54.158	32.063	1.00	28.91	O
ATOM	1971	CB	ALA A 372	80.746	54.226	29.423	1.00	25.48	C
ATOM	1972	N	MET A 373	77.723	54.828	30.271	1.00	28.54	N
ATOM	1973	CA	MET A 373	76.813	55.616	31.090	1.00	28.48	C
ATOM	1974	C	MET A 373	75.815	54.738	31.853	1.00	28.37	C
ATOM	1975	O	MET A 373	75.048	55.238	32.665	1.00	28.46	O
ATOM	1976	CB	MET A 373	76.084	56.655	30.229	1.00	26.76	C
ATOM	1977	CG	MET A 373	76.992	57.775	29.722	1.00	26.55	C
ATOM	1978	SD	MET A 373	76.204	58.784	28.435	1.00	29.55	S
ATOM	1979	CE	MET A 373	77.549	59.940	27.986	1.00	27.96	C
ATOM	1980	N	GLY A 374	75.825	53.430	31.606	1.00	28.86	N
ATOM	1981	CA	GLY A 374	74.917	52.563	32.344	1.00	27.32	C
ATOM	1982	C	GLY A 374	73.906	51.744	31.563	1.00	28.78	C
ATOM	1983	O	GLY A 374	73.257	50.862	32.133	1.00	29.86	O
ATOM	1984	N	ALA A 375	73.746	52.023	30.274	1.00	27.82	N
ATOM	1985	CA	ALA A 375	72.812	51.249	29.472	1.00	28.98	C
ATOM	1986	C	ALA A 375	73.363	49.829	29.355	1.00	29.41	C
ATOM	1987	O	ALA A 375	74.552	49.641	29.099	1.00	30.88	O
ATOM	1988	CB	ALA A 375	72.657	51.866	28.086	1.00	26.18	C
ATOM	1989	N	ASP A 376	72.500	48.837	29.545	1.00	29.72	N
ATOM	1990	CA	ASP A 376	72.900	47.435	29.457	1.00	30.17	C

TABLE 6

ATOM	1991	C	ASP	A 376	72.997	47.034	27.994	1.00	30.68	C
ATOM	1992	O	ASP	A 376	73.896	46.293	27.597	1.00	30.02	O
ATOM	1993	CB	ASP	A 376	71.882	46.568	30.187	1.00	30.75	C
ATOM	1994	CG	ASP	A 376	71.780	46.924	31.658	1.00	31.02	C
ATOM	1995	OD1	ASP	A 376	72.596	46.409	32.455	1.00	29.99	O
ATOM	1996	OD2	ASP	A 376	70.895	47.733	32.013	1.00	31.49	O
ATOM	1997	N	PHE	A 377	72.058	47.513	27.189	1.00	30.61	N
ATOM	1998	CA	PHE	A 377	72.106	47.236	25.767	1.00	30.87	C
ATOM	1999	C	PHE	A 377	71.603	48.425	24.954	1.00	30.14	C
ATOM	2000	O	PHE	A 377	71.047	49.388	25.498	1.00	29.61	O
ATOM	2001	CB	PHE	A 377	71.374	45.922	25.396	1.00	29.78	C
ATOM	2002	CG	PHE	A 377	69.955	45.827	25.881	1.00	31.57	C
ATOM	2003	CD1	PHE	A 377	69.673	45.401	27.178	1.00	31.78	C
ATOM	2004	CD2	PHE	A 377	68.894	46.099	25.020	1.00	31.27	C
ATOM	2005	CE1	PHE	A 377	68.349	45.242	27.610	1.00	32.32	C
ATOM	2006	CE2	PHE	A 377	67.569	45.945	25.436	1.00	32.45	C
ATOM	2007	CZ	PHE	A 377	67.295	45.514	26.735	1.00	32.96	C
ATOM	2008	N	ILE	A 378	71.820	48.354	23.648	1.00	30.17	N
ATOM	2009	CA	ILE	A 378	71.473	49.436	22.742	1.00	30.04	C
ATOM	2010	C	ILE	A 378	70.520	49.007	21.627	1.00	30.86	C
ATOM	2011	O	ILE	A 378	70.693	47.939	21.038	1.00	31.49	O
ATOM	2012	CB	ILE	A 378	72.772	49.974	22.099	1.00	31.01	C
ATOM	2013	CG1	ILE	A 378	73.760	50.360	23.201	1.00	32.35	C
ATOM	2014	CG2	ILE	A 378	72.482	51.174	21.191	1.00	31.58	C
ATOM	2015	CD1	ILE	A 378	75.178	50.566	22.694	1.00	34.75	C
ATOM	2016	N	MET	A 379	69.511	49.829	21.349	1.00	29.83	N
ATOM	2017	CA	MET	A 379	68.581	49.531	20.265	1.00	30.54	C
ATOM	2018	C	MET	A 379	68.913	50.461	19.095	1.00	30.14	C
ATOM	2019	O	MET	A 379	69.010	51.669	19.268	1.00	29.93	O
ATOM	2020	CB	MET	A 379	67.122	49.749	20.694	1.00	30.89	C
ATOM	2021	CG	MET	A 379	66.139	49.547	19.538	1.00	31.32	C
ATOM	2022	SD	MET	A 379	64.386	49.460	19.961	1.00	31.78	S
ATOM	2023	CE	MET	A 379	64.246	47.743	20.461	1.00	30.99	C
ATOM	2024	N	LEU	A 380	69.090	49.901	17.906	1.00	30.34	N
ATOM	2025	CA	LEU	A 380	69.416	50.720	16.746	1.00	31.69	C
ATOM	2026	C	LEU	A 380	68.521	50.429	15.553	1.00	31.86	C
ATOM	2027	O	LEU	A 380	68.100	49.293	15.343	1.00	31.20	O
ATOM	2028	CB	LEU	A 380	70.879	50.514	16.331	1.00	31.86	C
ATOM	2029	CG	LEU	A 380	71.975	50.752	17.373	1.00	33.23	C
ATOM	2030	CD1	LEU	A 380	72.067	49.532	18.282	1.00	34.47	C
ATOM	2031	CD2	LEU	A 380	73.319	50.966	16.679	1.00	33.89	C
ATOM	2032	N	GLY	A 381	68.241	51.469	14.775	1.00	32.46	N
ATOM	2033	CA	GLY	A 381	67.414	51.321	13.589	1.00	33.27	C
ATOM	2034	C	GLY	A 381	68.237	51.561	12.338	1.00	34.20	C
ATOM	2035	O	GLY	A 381	68.519	50.635	11.580	1.00	34.83	O
ATOM	2036	N	ARG	A 382	68.630	52.813	12.132	1.00	35.93	N
ATOM	2037	CA	ARG	A 382	69.431	53.220	10.978	1.00	37.19	C
ATOM	2038	C	ARG	A 382	70.643	52.297	10.765	1.00	36.78	C
ATOM	2039	O	ARG	A 382	70.879	51.801	9.660	1.00	35.86	O
ATOM	2040	CB	ARG	A 382	69.905	54.666	11.181	1.00	39.94	C
ATOM	2041	CG	ARG	A 382	70.739	55.238	10.039	1.00	45.52	C
ATOM	2042	CD	ARG	A 382	71.468	56.513	10.466	1.00	49.66	C
ATOM	2043	NE	ARG	A 382	72.418	56.259	11.552	1.00	53.52	N
ATOM	2044	CZ	ARG	A 382	73.540	55.552	11.423	1.00	54.96	C
ATOM	2045	NH1	ARG	A 382	73.871	55.023	10.249	1.00	54.91	N
ATOM	2046	NH2	ARG	A 382	74.327	55.359	12.478	1.00	54.92	N
ATOM	2047	N	TYR	A 383	71.405	52.080	11.834	1.00	35.43	N



TABLE 6

ATOM	2048	CA	TYR	A	383	72.595	51.230	11.798	1.00	34.40	C
ATOM	2049	C	TYR	A	383	72.324	49.893	11.108	1.00	34.58	C
ATOM	2050	O	TYR	A	383	73.082	49.480	10.229	1.00	35.55	O
ATOM	2051	CB	TYR	A	383	73.091	50.975	13.230	1.00	32.13	C
ATOM	2052	CG	TYR	A	383	74.315	50.090	13.328	1.00	32.06	C
ATOM	2053	CD1	TYR	A	383	75.603	50.628	13.275	1.00	31.61	C
ATOM	2054	CD2	TYR	A	383	74.185	48.711	13.476	1.00	31.52	C
ATOM	2055	CE1	TYR	A	383	76.728	49.811	13.370	1.00	32.15	C
ATOM	2056	CE2	TYR	A	383	75.293	47.889	13.569	1.00	30.67	C
ATOM	2057	CZ	TYR	A	383	76.564	48.440	13.516	1.00	33.10	C
ATOM	2058	OH	TYR	A	383	77.662	47.610	13.604	1.00	30.90	O
ATOM	2059	N	PHE	A	384	71.242	49.227	11.505	1.00	32.76	N
ATOM	2060	CA	PHE	A	384	70.877	47.929	10.936	1.00	34.01	C
ATOM	2061	C	PHE	A	384	70.164	47.997	9.574	1.00	34.71	C
ATOM	2062	O	PHE	A	384	70.249	47.058	8.782	1.00	35.23	O
ATOM	2063	CB	PHE	A	384	70.004	47.150	11.930	1.00	32.49	C
ATOM	2064	CG	PHE	A	384	70.764	46.603	13.115	1.00	33.56	C
ATOM	2065	CD1	PHE	A	384	71.737	45.618	12.944	1.00	32.15	C
ATOM	2066	CD2	PHE	A	384	70.510	47.076	14.401	1.00	31.87	C
ATOM	2067	CE1	PHE	A	384	72.447	45.113	14.037	1.00	32.91	C
ATOM	2068	CE2	PHE	A	384	71.211	46.579	15.497	1.00	32.18	C
ATOM	2069	CZ	PHE	A	384	72.181	45.596	15.317	1.00	31.64	C
ATOM	2070	N	ALA	A	385	69.465	49.096	9.305	1.00	35.43	N
ATOM	2071	CA	ALA	A	385	68.750	49.250	8.036	1.00	36.93	C
ATOM	2072	C	ALA	A	385	69.702	49.171	6.842	1.00	37.68	C
ATOM	2073	O	ALA	A	385	69.335	48.678	5.776	1.00	37.47	O
ATOM	2074	CB	ALA	A	385	67.999	50.585	8.014	1.00	35.75	C
ATOM	2075	N	ARG	A	386	70.926	49.658	7.038	1.00	38.60	N
ATOM	2076	CA	ARG	A	386	71.956	49.672	6.001	1.00	38.80	C
ATOM	2077	C	ARG	A	386	72.388	48.285	5.532	1.00	39.38	C
ATOM	2078	O	ARG	A	386	73.027	48.151	4.482	1.00	39.24	O
ATOM	2079	CB	ARG	A	386	73.213	50.392	6.506	1.00	38.96	C
ATOM	2080	CG	ARG	A	386	73.057	51.842	6.915	1.00	41.08	C
ATOM	2081	CD	ARG	A	386	74.373	52.314	7.530	1.00	43.49	C
ATOM	2082	NE	ARG	A	386	74.784	51.422	8.616	1.00	45.03	N
ATOM	2083	CZ	ARG	A	386	76.045	51.162	8.950	1.00	45.42	C
ATOM	2084	NH1	ARG	A	386	77.049	51.724	8.284	1.00	44.14	N
ATOM	2085	NH2	ARG	A	386	76.301	50.330	9.954	1.00	44.38	N
ATOM	2086	N	PHE	A	387	72.057	47.256	6.302	1.00	40.14	N
ATOM	2087	CA	PHE	A	387	72.483	45.911	5.950	1.00	41.48	C
ATOM	2088	C	PHE	A	387	71.620	45.137	4.954	1.00	43.09	C
ATOM	2089	O	PHE	A	387	70.412	45.350	4.827	1.00	43.30	O
ATOM	2090	CB	PHE	A	387	72.658	45.066	7.218	1.00	41.15	C
ATOM	2091	CG	PHE	A	387	73.559	45.690	8.255	1.00	41.44	C
ATOM	2092	CD1	PHE	A	387	74.665	46.450	7.878	1.00	40.93	C
ATOM	2093	CD2	PHE	A	387	73.312	45.496	9.614	1.00	40.05	C
ATOM	2094	CE1	PHE	A	387	75.512	47.007	8.837	1.00	40.83	C
ATOM	2095	CE2	PHE	A	387	74.154	46.048	10.583	1.00	39.34	C
ATOM	2096	CZ	PHE	A	387	75.254	46.804	10.196	1.00	39.79	C
ATOM	2097	N	GLU	A	388	72.284	44.222	4.261	1.00	44.03	N
ATOM	2098	CA	GLU	A	388	71.673	43.348	3.274	1.00	45.03	C
ATOM	2099	C	GLU	A	388	70.445	42.655	3.850	1.00	44.35	C
ATOM	2100	O	GLU	A	388	69.431	42.507	3.171	1.00	43.66	O
ATOM	2101	CB	GLU	A	388	72.700	42.297	2.846	1.00	46.61	C
ATOM	2102	CG	GLU	A	388	72.210	41.252	1.853	1.00	50.47	C
ATOM	2103	CD	GLU	A	388	71.843	41.854	0.516	1.00	52.73	C
ATOM	2104	OE1	GLU	A	388	72.569	42.769	0.063	1.00	54.19	O

TABLE 6

ATOM	2105	OE2	GLU	A	388	70.842	41.407	-0.089	1.00	54.15	O
ATOM	2106	N	GLU	A	389	70.535	42.250	5.114	1.00	43.43	N
ATOM	2107	CA	GLU	A	389	69.442	41.540	5.762	1.00	42.71	C
ATOM	2108	C	GLU	A	389	68.218	42.345	6.187	1.00	42.10	C
ATOM	2109	O	GLU	A	389	67.249	41.765	6.663	1.00	41.97	O
ATOM	2110	CB	GLU	A	389	69.973	40.738	6.955	1.00	41.76	C
ATOM	2111	CG	GLU	A	389	71.002	39.695	6.563	1.00	42.42	C
ATOM	2112	CD	GLU	A	389	72.429	40.180	6.750	1.00	43.40	C
ATOM	2113	OE1	GLU	A	389	72.688	41.387	6.567	1.00	42.57	O
ATOM	2114	OE2	GLU	A	389	73.297	39.344	7.074	1.00	43.26	O
ATOM	2115	N	SER	A	390	68.245	43.666	6.041	1.00	43.01	N
ATOM	2116	CA	SER	A	390	67.065	44.446	6.399	1.00	45.54	C
ATOM	2117	C	SER	A	390	66.047	44.174	5.280	1.00	47.27	C
ATOM	2118	O	SER	A	390	66.422	44.044	4.112	1.00	46.75	O
ATOM	2119	CB	SER	A	390	67.387	45.938	6.492	1.00	44.44	C
ATOM	2120	OG	SER	A	390	67.730	46.469	5.230	1.00	47.93	O
ATOM	2121	N	PRO	A	391	64.750	44.096	5.625	1.00	48.64	N
ATOM	2122	CA	PRO	A	391	63.649	43.825	4.690	1.00	50.18	C
ATOM	2123	C	PRO	A	391	63.348	44.842	3.587	1.00	51.58	C
ATOM	2124	O	PRO	A	391	62.530	44.575	2.707	1.00	53.10	O
ATOM	2125	CB	PRO	A	391	62.459	43.632	5.626	1.00	49.90	C
ATOM	2126	CG	PRO	A	391	62.741	44.643	6.698	1.00	48.60	C
ATOM	2127	CD	PRO	A	391	64.223	44.439	6.962	1.00	47.30	C
ATOM	2128	N	THR	A	392	63.996	45.998	3.623	1.00	52.18	N
ATOM	2129	CA	THR	A	392	63.737	47.020	2.620	1.00	52.69	C
ATOM	2130	C	THR	A	392	64.409	46.724	1.287	1.00	54.68	C
ATOM	2131	O	THR	A	392	65.163	45.759	1.158	1.00	54.94	O
ATOM	2132	CB	THR	A	392	64.186	48.403	3.114	1.00	51.72	C
ATOM	2133	OG1	THR	A	392	65.610	48.421	3.263	1.00	50.10	O
ATOM	2134	CG2	THR	A	392	63.528	48.719	4.455	1.00	50.74	C
ATOM	2135	N	ARG	A	393	64.132	47.565	0.295	1.00	56.32	N
ATOM	2136	CA	ARG	A	393	64.699	47.376	-1.032	1.00	58.34	C
ATOM	2137	C	ARG	A	393	66.023	48.088	-1.244	1.00	58.35	C
ATOM	2138	O	ARG	A	393	66.223	49.219	-0.800	1.00	57.31	O
ATOM	2139	CB	ARG	A	393	63.701	47.818	-2.112	1.00	60.27	C
ATOM	2140	CG	ARG	A	393	62.463	46.928	-2.205	1.00	63.46	C
ATOM	2141	CD	ARG	A	393	61.561	47.293	-3.386	1.00	65.10	C
ATOM	2142	NE	ARG	A	393	61.125	48.684	-3.338	1.00	66.35	N
ATOM	2143	CZ	ARG	A	393	61.584	49.639	-4.139	1.00	67.03	C
ATOM	2144	NH1	ARG	A	393	62.495	49.355	-5.063	1.00	67.37	N
ATOM	2145	NH2	ARG	A	393	61.144	50.883	-4.006	1.00	67.53	N
ATOM	2146	N	LYS	A	394	66.927	47.394	-1.925	1.00	59.11	N
ATOM	2147	CA	LYS	A	394	68.241	47.922	-2.248	1.00	59.88	C
ATOM	2148	C	LYS	A	394	68.034	48.693	-3.542	1.00	60.73	C
ATOM	2149	O	LYS	A	394	67.680	48.106	-4.562	1.00	61.24	O
ATOM	2150	CB	LYS	A	394	69.218	46.768	-2.479	1.00	59.07	C
ATOM	2151	CG	LYS	A	394	70.646	47.055	-2.060	1.00	58.59	C
ATOM	2152	CD	LYS	A	394	71.590	45.945	-2.504	1.00	58.08	C
ATOM	2153	CE	LYS	A	394	71.164	44.582	-1.990	1.00	57.63	C
ATOM	2154	NZ	LYS	A	394	72.088	43.519	-2.476	1.00	57.79	N
ATOM	2155	N	VAL	A	395	68.234	50.005	-3.503	1.00	62.13	N
ATOM	2156	CA	VAL	A	395	68.048	50.827	-4.692	1.00	63.84	C
ATOM	2157	C	VAL	A	395	69.326	51.564	-5.069	1.00	65.15	C
ATOM	2158	O	VAL	A	395	69.995	52.143	-4.215	1.00	65.50	O
ATOM	2159	CB	VAL	A	395	66.917	51.859	-4.483	1.00	63.69	C
ATOM	2160	CG1	VAL	A	395	65.642	51.147	-4.064	1.00	63.82	C
ATOM	2161	CG2	VAL	A	395	67.323	52.884	-3.438	1.00	63.76	C

ATOM	2162	N	THR	A	396	69.666	51.537	-6.354	1.00	66.43	N
ATOM	2163	CA	THR	A	396	70.869	52.209	-6.829	1.00	67.58	C
ATOM	2164	C	THR	A	396	70.552	53.613	-7.319	1.00	68.48	C
ATOM	2165	O	THR	A	396	69.742	53.799	-8.227	1.00	68.56	O
ATOM	2166	CB	THR	A	396	71.535	51.427	-7.971	1.00	67.68	C
ATOM	2167	OG1	THR	A	396	71.919	50.130	-7.500	1.00	68.09	O
ATOM	2168	CG2	THR	A	396	72.773	52.162	-8.464	1.00	68.17	C
ATOM	2169	N	ILE	A	397	71.198	54.599	-6.707	1.00	69.55	N
ATOM	2170	CA	ILE	A	397	70.999	55.996	-7.066	1.00	70.46	C
ATOM	2171	C	ILE	A	397	72.322	56.609	-7.518	1.00	71.03	C
ATOM	2172	O	ILE	A	397	73.224	56.826	-6.708	1.00	71.53	O
ATOM	2173	CB	ILE	A	397	70.453	56.791	-5.867	1.00	70.76	C
ATOM	2174	CG1	ILE	A	397	69.148	56.154	-5.384	1.00	71.18	C
ATOM	2175	CG2	ILE	A	397	70.231	58.246	-6.259	1.00	70.80	C
ATOM	2176	CD1	ILE	A	397	68.542	56.832	-4.175	1.00	71.99	C
ATOM	2177	N	ASN	A	398	72.425	56.879	-8.817	1.00	71.45	N
ATOM	2178	CA	ASN	A	398	73.624	57.464	-9.417	1.00	71.04	C
ATOM	2179	C	ASN	A	398	74.940	56.865	-8.914	1.00	69.90	C
ATOM	2180	O	ASN	A	398	75.802	57.574	-8.389	1.00	69.77	O
ATOM	2181	CB	ASN	A	398	73.630	58.989	-9.218	1.00	72.89	C
ATOM	2182	CG	ASN	A	398	73.544	59.397	-7.755	1.00	74.87	C
ATOM	2183	OD1	ASN	A	398	74.421	59.071	-6.949	1.00	76.25	O
ATOM	2184	ND2	ASN	A	398	72.483	60.119	-7.406	1.00	75.32	N
ATOM	2185	N	GLY	A	399	75.088	55.554	-9.082	1.00	68.28	N
ATOM	2186	CA	GLY	A	399	76.307	54.885	-8.659	1.00	66.71	C
ATOM	2187	C	GLY	A	399	76.392	54.549	-7.181	1.00	65.56	C
ATOM	2188	O	GLY	A	399	77.351	53.912	-6.739	1.00	65.55	O
ATOM	2189	N	SER	A	400	75.398	54.976	-6.410	1.00	63.82	N
ATOM	2190	CA	SER	A	400	75.391	54.697	-4.980	1.00	61.70	C
ATOM	2191	C	SER	A	400	74.256	53.761	-4.602	1.00	59.98	C
ATOM	2192	O	SER	A	400	73.086	54.095	-4.768	1.00	60.36	O
ATOM	2193	CB	SER	A	400	75.267	55.997	-4.185	1.00	61.29	C
ATOM	2194	OG	SER	A	400	76.440	56.778	-4.317	1.00	62.16	O
ATOM	2195	N	VAL	A	401	74.606	52.583	-4.101	1.00	58.09	N
ATOM	2196	CA	VAL	A	401	73.602	51.617	-3.685	1.00	56.62	C
ATOM	2197	C	VAL	A	401	73.099	52.029	-2.303	1.00	56.96	C
ATOM	2198	O	VAL	A	401	73.886	52.176	-1.361	1.00	57.55	O
ATOM	2199	CB	VAL	A	401	74.190	50.198	-3.621	1.00	56.19	C
ATOM	2200	CG1	VAL	A	401	73.129	49.214	-3.161	1.00	54.63	C
ATOM	2201	CG2	VAL	A	401	74.729	49.805	-4.992	1.00	55.02	C
ATOM	2202	N	MET	A	402	71.789	52.226	-2.190	1.00	55.36	N
ATOM	2203	CA	MET	A	402	71.181	52.648	-0.935	1.00	53.84	C
ATOM	2204	C	MET	A	402	70.113	51.661	-0.482	1.00	52.61	C
ATOM	2205	O	MET	A	402	69.789	50.707	-1.188	1.00	51.84	O
ATOM	2206	CB	MET	A	402	70.521	54.022	-1.109	1.00	55.25	C
ATOM	2207	CG	MET	A	402	71.356	55.062	-1.837	1.00	55.38	C
ATOM	2208	SD	MET	A	402	72.760	55.653	-0.884	1.00	59.37	S
ATOM	2209	CE	MET	A	402	71.959	56.904	0.134	1.00	56.83	C
ATOM	2210	N	LYS	A	403	69.579	51.900	0.713	1.00	50.16	N
ATOM	2211	CA	LYS	A	403	68.506	51.082	1.258	1.00	48.17	C
ATOM	2212	C	LYS	A	403	67.452	52.043	1.791	1.00	47.24	C
ATOM	2213	O	LYS	A	403	67.776	53.124	2.285	1.00	46.17	O
ATOM	2214	CB	LYS	A	403	69.007	50.168	2.382	1.00	48.44	C
ATOM	2215	CG	LYS	A	403	69.976	49.093	1.921	1.00	48.79	C
ATOM	2216	CD	LYS	A	403	69.677	47.739	2.552	1.00	48.91	C
ATOM	2217	CE	LYS	A	403	68.415	47.121	1.972	1.00	48.79	C
ATOM	2218	NZ	LYS	A	403	68.133	45.771	2.538	1.00	47.65	N

ATOM	2219	N	GLU	A	404	66.189	51.660	1.674	1.00	46.83	N
ATOM	2220	CA	GLU	A	404	65.115	52.514	2.147	1.00	46.62	C
ATOM	2221	C	GLU	A	404	65.046	52.448	3.661	1.00	45.53	C
ATOM	2222	O	GLU	A	404	65.329	51.412	4.269	1.00	43.78	O
ATOM	2223	CB	GLU	A	404	63.776	52.064	1.582	1.00	49.02	C
ATOM	2224	CG	GLU	A	404	63.846	51.421	0.222	1.00	53.76	C
ATOM	2225	CD	GLU	A	404	62.473	51.056	-0.291	1.00	55.98	C
ATOM	2226	OE1	GLU	A	404	61.767	51.971	-0.772	1.00	56.94	O
ATOM	2227	OE2	GLU	A	404	62.100	49.863	-0.193	1.00	57.61	O
ATOM	2228	N	TYR	A	405	64.661	53.560	4.268	1.00	44.22	N
ATOM	2229	CA	TYR	A	405	64.543	53.615	5.708	1.00	43.49	C
ATOM	2230	C	TYR	A	405	63.488	54.634	6.071	1.00	42.96	C
ATOM	2231	O	TYR	A	405	63.612	55.811	5.744	1.00	43.26	O
ATOM	2232	CB	TYR	A	405	65.883	53.992	6.341	1.00	43.62	C
ATOM	2233	CG	TYR	A	405	65.853	54.018	7.851	1.00	43.93	C
ATOM	2234	CD1	TYR	A	405	65.416	52.913	8.579	1.00	42.98	C
ATOM	2235	CD2	TYR	A	405	66.258	55.150	8.554	1.00	44.65	C
ATOM	2236	CE1	TYR	A	405	65.380	52.938	9.972	1.00	44.02	C
ATOM	2237	CE2	TYR	A	405	66.227	55.184	9.946	1.00	44.86	C
ATOM	2238	CZ	TYR	A	405	65.786	54.077	10.646	1.00	43.66	C
ATOM	2239	OH	TYR	A	405	65.736	54.126	12.018	1.00	43.77	O
ATOM	2240	N	TRP	A	406	62.438	54.171	6.738	1.00	41.92	N
ATOM	2241	CA	TRP	A	406	61.361	55.052	7.149	1.00	40.82	C
ATOM	2242	C	TRP	A	406	60.985	54.760	8.594	1.00	40.62	C
ATOM	2243	O	TRP	A	406	61.088	53.622	9.056	1.00	40.00	O
ATOM	2244	CB	TRP	A	406	60.147	54.878	6.214	1.00	38.27	C
ATOM	2245	CG	TRP	A	406	59.520	53.510	6.228	1.00	35.96	C
ATOM	2246	CD1	TRP	A	406	58.543	53.065	7.074	1.00	35.09	C
ATOM	2247	CD2	TRP	A	406	59.845	52.405	5.373	1.00	35.52	C
ATOM	2248	NE1	TRP	A	406	58.239	51.752	6.800	1.00	36.00	N
ATOM	2249	CE2	TRP	A	406	59.024	51.320	5.762	1.00	36.30	C
ATOM	2250	CE3	TRP	A	406	60.750	52.225	4.315	1.00	36.42	C
ATOM	2251	CZ2	TRP	A	406	59.079	50.068	5.130	1.00	35.10	C
ATOM	2252	CZ3	TRP	A	406	60.806	50.979	3.683	1.00	35.93	C
ATOM	2253	CH2	TRP	A	406	59.972	49.918	4.096	1.00	35.80	C
ATOM	2254	N	GLY	A	407	60.568	55.800	9.307	1.00	41.39	N
ATOM	2255	CA	GLY	A	407	60.178	55.640	10.693	1.00	42.59	C
ATOM	2256	C	GLY	A	407	58.772	55.085	10.825	1.00	43.19	C
ATOM	2257	O	GLY	A	407	57.991	55.101	9.874	1.00	43.52	O
ATOM	2258	N	GLU	A	408	58.452	54.589	12.013	1.00	43.79	N
ATOM	2259	CA	GLU	A	408	57.138	54.029	12.287	1.00	43.77	C
ATOM	2260	C	GLU	A	408	56.100	55.139	12.370	1.00	45.22	C
ATOM	2261	O	GLU	A	408	54.899	54.891	12.292	1.00	45.34	O
ATOM	2262	CB	GLU	A	408	57.181	53.252	13.599	1.00	42.61	C
ATOM	2263	CG	GLU	A	408	58.025	51.997	13.524	1.00	41.23	C
ATOM	2264	CD	GLU	A	408	57.372	50.920	12.674	1.00	39.91	C
ATOM	2265	OE1	GLU	A	408	56.280	50.456	13.056	1.00	39.37	O
ATOM	2266	OE2	GLU	A	408	57.944	50.540	11.632	1.00	39.32	O
ATOM	2267	N	GLY	A	409	56.576	56.368	12.529	1.00	46.42	N
ATOM	2268	CA	GLY	A	409	55.676	57.500	12.619	1.00	48.58	C
ATOM	2269	C	GLY	A	409	55.339	58.095	11.265	1.00	49.72	C
ATOM	2270	O	GLY	A	409	54.491	58.977	11.174	1.00	49.49	O
ATOM	2271	N	SER	A	410	56.001	57.628	10.210	1.00	51.57	N
ATOM	2272	CA	SER	A	410	55.725	58.151	8.876	1.00	53.58	C
ATOM	2273	C	SER	A	410	54.411	57.566	8.385	1.00	55.64	C
ATOM	2274	O	SER	A	410	54.006	56.486	8.816	1.00	54.76	O
ATOM	2275	CB	SER	A	410	56.849	57.791	7.899	1.00	53.27	C

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ATOM	2276	OG	SER	A	410	56.837	56.411	7.578	1.00	54.06	O
ATOM	2277	N	SER	A	411	53.740	58.285	7.490	1.00	58.45	N
ATOM	2278	CA	SER	A	411	52.472	57.816	6.951	1.00	61.28	C
ATOM	2279	C	SER	A	411	52.689	56.508	6.199	1.00	62.71	C
ATOM	2280	O	SER	A	411	51.794	55.662	6.123	1.00	62.97	O
ATOM	2281	CB	SER	A	411	51.875	58.873	6.020	1.00	62.05	C
ATOM	2282	OG	SER	A	411	52.807	59.264	5.028	1.00	63.19	O
ATOM	2283	N	ARG	A	412	53.892	56.343	5.658	1.00	64.06	N
ATOM	2284	CA	ARG	A	412	54.241	55.141	4.910	1.00	65.82	C
ATOM	2285	C	ARG	A	412	54.229	53.882	5.776	1.00	67.23	C
ATOM	2286	O	ARG	A	412	54.157	52.768	5.259	1.00	66.85	O
ATOM	2287	CB	ARG	A	412	55.626	55.306	4.273	1.00	64.77	C
ATOM	2288	CG	ARG	A	412	56.114	54.068	3.544	1.00	63.53	C
ATOM	2289	CD	ARG	A	412	57.441	54.298	2.845	1.00	62.50	C
ATOM	2290	NE	ARG	A	412	57.882	53.089	2.155	1.00	61.94	N
ATOM	2291	CZ	ARG	A	412	58.990	52.996	1.429	1.00	62.83	C
ATOM	2292	NH1	ARG	A	412	59.791	54.047	1.286	1.00	62.91	N
ATOM	2293	NH2	ARG	A	412	59.298	51.846	0.842	1.00	62.91	N
ATOM	2294	N	ALA	A	413	54.285	54.065	7.093	1.00	69.94	N
ATOM	2295	CA	ALA	A	413	54.315	52.940	8.022	1.00	72.61	C
ATOM	2296	C	ALA	A	413	52.973	52.554	8.631	1.00	74.53	C
ATOM	2297	O	ALA	A	413	52.439	51.485	8.337	1.00	74.51	O
ATOM	2298	CB	ALA	A	413	55.323	53.221	9.138	1.00	71.60	C
ATOM	2299	N	ARG	A	414	52.434	53.419	9.487	1.00	77.76	N
ATOM	2300	CA	ARG	A	414	51.167	53.137	10.155	1.00	80.61	C
ATOM	2301	C	ARG	A	414	49.963	53.024	9.213	1.00	81.50	C
ATOM	2302	O	ARG	A	414	48.815	53.073	9.661	1.00	81.79	O
ATOM	2303	CB	ARG	A	414	50.893	54.184	11.247	1.00	81.68	C
ATOM	2304	CG	ARG	A	414	50.556	55.589	10.755	1.00	83.90	C
ATOM	2305	CD	ARG	A	414	50.207	56.490	11.941	1.00	85.67	C
ATOM	2306	NE	ARG	A	414	49.470	57.693	11.558	1.00	87.41	N
ATOM	2307	CZ	ARG	A	414	48.918	58.537	12.426	1.00	88.02	C
ATOM	2308	NH1	ARG	A	414	49.021	58.312	13.731	1.00	87.96	N
ATOM	2309	NH2	ARG	A	414	48.253	59.602	11.994	1.00	88.30	N
ATOM	2310	N	ASN	A	415	50.226	52.867	7.916	1.00	82.42	N
ATOM	2311	CA	ASN	A	415	49.152	52.714	6.932	1.00	82.74	C
ATOM	2312	C	ASN	A	415	48.897	51.218	6.722	1.00	83.26	C
ATOM	2313	O	ASN	A	415	48.846	50.745	5.583	1.00	82.62	O
ATOM	2314	CB	ASN	A	415	49.535	53.345	5.581	1.00	83.10	C
ATOM	2315	CG	ASN	A	415	48.309	53.763	4.757	1.00	83.44	C
ATOM	2316	OD1	ASN	A	415	48.403	53.990	3.538	1.00	81.84	O
ATOM	2317	ND2	ASN	A	415	47.148	53.894	5.426	1.00	83.48	N
ATOM	2318	N	TRP	A	416	48.751	50.476	7.819	1.00	83.43	N
ATOM	2319	CA	TRP	A	416	48.504	49.039	7.734	1.00	83.29	C
ATOM	2320	C	TRP	A	416	47.153	48.658	8.340	1.00	83.50	C
ATOM	2321	O	TRP	A	416	46.650	49.328	9.246	1.00	83.70	O
ATOM	2322	CB	TRP	A	416	49.622	48.251	8.435	1.00	83.05	C
ATOM	2323	CG	TRP	A	416	49.577	48.306	9.936	1.00	83.22	C
ATOM	2324	CD1	TRP	A	416	50.081	49.288	10.742	1.00	83.70	C
ATOM	2325	CD2	TRP	A	416	48.957	47.350	10.807	1.00	83.09	C
ATOM	2326	NE1	TRP	A	416	49.812	49.003	12.062	1.00	83.83	N
ATOM	2327	CE2	TRP	A	416	49.122	47.820	12.130	1.00	83.53	C
ATOM	2328	CE3	TRP	A	416	48.274	46.143	10.597	1.00	82.77	C
ATOM	2329	CZ2	TRP	A	416	48.629	47.123	13.240	1.00	83.40	C
ATOM	2330	CZ3	TRP	A	416	47.784	45.452	11.699	1.00	82.88	C
ATOM	2331	CH2	TRP	A	416	47.965	45.945	13.005	1.00	83.24	C
ATOM	2332	N	GLU	A	431	55.027	62.893	11.346	1.00	77.68	N

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ATOM	2333	CA	GLU	A	431	55.426	62.297	12.617	1.00	77.79	C
ATOM	2334	C	GLU	A	431	56.719	61.495	12.439	1.00	76.90	C
ATOM	2335	O	GLU	A	431	57.500	61.317	13.379	1.00	77.08	O
ATOM	2336	CB	GLU	A	431	54.302	61.396	13.140	1.00	79.27	C
ATOM	2337	CG	GLU	A	431	52.947	62.100	13.227	1.00	81.73	C
ATOM	2338	CD	GLU	A	431	51.852	61.222	13.817	1.00	83.20	C
ATOM	2339	OE1	GLU	A	431	51.961	60.841	15.004	1.00	83.92	O
ATOM	2340	OE2	GLU	A	431	50.881	60.914	13.093	1.00	83.75	O
ATOM	2341	N	GLY	A	432	56.936	61.018	11.218	1.00	75.40	N
ATOM	2342	CA	GLY	A	432	58.133	60.258	10.909	1.00	73.03	C
ATOM	2343	C	GLY	A	432	58.611	60.653	9.525	1.00	71.34	C
ATOM	2344	O	GLY	A	432	57.915	61.386	8.818	1.00	71.32	O
ATOM	2345	N	VAL	A	433	59.789	60.179	9.130	1.00	69.14	N
ATOM	2346	CA	VAL	A	433	60.319	60.512	7.813	1.00	66.51	C
ATOM	2347	C	VAL	A	433	60.700	59.280	6.994	1.00	64.72	C
ATOM	2348	O	VAL	A	433	60.990	58.216	7.543	1.00	64.04	O
ATOM	2349	CB	VAL	A	433	61.551	61.445	7.924	1.00	66.56	C
ATOM	2350	CG1	VAL	A	433	61.165	62.728	8.642	1.00	66.22	C
ATOM	2351	CG2	VAL	A	433	62.676	60.743	8.658	1.00	66.90	C
ATOM	2352	N	ASP	A	434	60.683	59.446	5.675	1.00	62.15	N
ATOM	2353	CA	ASP	A	434	61.019	58.387	4.732	1.00	59.84	C
ATOM	2354	C	ASP	A	434	62.320	58.807	4.046	1.00	58.55	C
ATOM	2355	O	ASP	A	434	62.383	59.876	3.441	1.00	58.58	O
ATOM	2356	CB	ASP	A	434	59.894	58.247	3.699	1.00	59.57	C
ATOM	2357	CG	ASP	A	434	60.072	57.047	2.795	1.00	59.49	C
ATOM	2358	OD1	ASP	A	434	59.322	56.927	1.804	1.00	59.07	O
ATOM	2359	OD2	ASP	A	434	60.959	56.217	3.079	1.00	60.22	O
ATOM	2360	N	SER	A	435	63.355	57.976	4.136	1.00	56.49	N
ATOM	2361	CA	SER	A	435	64.641	58.320	3.537	1.00	54.56	C
ATOM	2362	C	SER	A	435	65.459	57.138	3.031	1.00	52.57	C
ATOM	2363	O	SER	A	435	64.954	56.028	2.890	1.00	51.40	O
ATOM	2364	CB	SER	A	435	65.480	59.107	4.546	1.00	55.14	C
ATOM	2365	OG	SER	A	435	65.660	58.357	5.736	1.00	56.74	O
ATOM	2366	N	TYR	A	436	66.735	57.401	2.764	1.00	51.28	N
ATOM	2367	CA	TYR	A	436	67.664	56.391	2.269	1.00	50.73	C
ATOM	2368	C	TYR	A	436	68.936	56.359	3.114	1.00	50.04	C
ATOM	2369	O	TYR	A	436	69.356	57.382	3.657	1.00	50.12	O
ATOM	2370	CB	TYR	A	436	68.057	56.704	0.824	1.00	52.87	C
ATOM	2371	CG	TYR	A	436	66.940	56.591	-0.185	1.00	53.47	C
ATOM	2372	CD1	TYR	A	436	66.475	55.344	-0.603	1.00	53.78	C
ATOM	2373	CD2	TYR	A	436	66.356	57.733	-0.733	1.00	54.90	C
ATOM	2374	CE1	TYR	A	436	65.457	55.237	-1.545	1.00	54.59	C
ATOM	2375	CE2	TYR	A	436	65.333	57.637	-1.679	1.00	55.49	C
ATOM	2376	CZ	TYR	A	436	64.891	56.386	-2.077	1.00	55.11	C
ATOM	2377	OH	TYR	A	436	63.876	56.285	-2.999	1.00	56.28	O
ATOM	2378	N	VAL	A	437	69.541	55.180	3.227	1.00	47.66	N
ATOM	2379	CA	VAL	A	437	70.785	55.022	3.969	1.00	46.24	C
ATOM	2380	C	VAL	A	437	71.743	54.236	3.089	1.00	46.02	C
ATOM	2381	O	VAL	A	437	71.343	53.283	2.421	1.00	45.29	O
ATOM	2382	CB	VAL	A	437	70.592	54.260	5.314	1.00	46.00	C
ATOM	2383	CG1	VAL	A	437	69.654	55.037	6.227	1.00	45.51	C
ATOM	2384	CG2	VAL	A	437	70.071	52.853	5.058	1.00	44.32	C
ATOM	2385	N	PRO	A	438	73.026	54.628	3.073	1.00	46.55	N
ATOM	2386	CA	PRO	A	438	74.024	53.935	2.252	1.00	45.89	C
ATOM	2387	C	PRO	A	438	74.178	52.463	2.600	1.00	45.71	C
ATOM	2388	O	PRO	A	438	74.268	52.095	3.773	1.00	45.41	O
ATOM	2389	CB	PRO	A	438	75.301	54.738	2.506	1.00	46.50	C

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ATOM	2390	CG	PRO	A	438	75.099	55.254	3.901	1.00	47.81	C
ATOM	2391	CD	PRO	A	438	73.652	55.688	3.881	1.00	46.25	C
ATOM	2392	N	TYR	A	439	74.191	51.629	1.564	1.00	44.94	N
ATOM	2393	CA	TYR	A	439	74.340	50.187	1.712	1.00	44.07	C
ATOM	2394	C	TYR	A	439	75.686	49.898	2.371	1.00	44.51	C
ATOM	2395	O	TYR	A	439	76.711	50.459	1.985	1.00	44.53	O
ATOM	2396	CB	TYR	A	439	74.273	49.521	0.334	1.00	42.82	C
ATOM	2397	CG	TYR	A	439	74.442	48.019	0.340	1.00	41.12	C
ATOM	2398	CD1	TYR	A	439	73.561	47.201	1.041	1.00	41.19	C
ATOM	2399	CD2	TYR	A	439	75.464	47.412	-0.388	1.00	42.23	C
ATOM	2400	CE1	TYR	A	439	73.690	45.811	1.014	1.00	41.86	C
ATOM	2401	CE2	TYR	A	439	75.603	46.025	-0.420	1.00	42.30	C
ATOM	2402	CZ	TYR	A	439	74.712	45.232	0.281	1.00	42.80	C
ATOM	2403	OH	TYR	A	439	74.834	43.861	0.242	1.00	44.53	O
ATOM	2404	N	ALA	A	440	75.684	49.014	3.361	1.00	44.65	N
ATOM	2405	CA	ALA	A	440	76.914	48.689	4.067	1.00	44.96	C
ATOM	2406	C	ALA	A	440	77.335	47.239	3.880	1.00	44.76	C
ATOM	2407	O	ALA	A	440	78.424	46.847	4.294	1.00	45.32	O
ATOM	2408	CB	ALA	A	440	76.751	49.001	5.549	1.00	44.41	C
ATOM	2409	N	GLY	A	441	76.479	46.447	3.248	1.00	44.13	N
ATOM	2410	CA	GLY	A	441	76.803	45.049	3.041	1.00	43.90	C
ATOM	2411	C	GLY	A	441	76.135	44.176	4.087	1.00	43.49	C
ATOM	2412	O	GLY	A	441	75.115	44.559	4.660	1.00	43.21	O
ATOM	2413	N	LYS	A	442	76.713	43.005	4.341	1.00	44.00	N
ATOM	2414	CA	LYS	A	442	76.171	42.064	5.318	1.00	44.24	C
ATOM	2415	C	LYS	A	442	76.360	42.533	6.757	1.00	43.92	C
ATOM	2416	O	LYS	A	442	77.363	43.171	7.091	1.00	44.02	O
ATOM	2417	CB	LYS	A	442	76.834	40.697	5.142	1.00	46.18	C
ATOM	2418	CG	LYS	A	442	76.608	40.085	3.766	1.00	50.07	C
ATOM	2419	CD	LYS	A	442	75.542	38.992	3.794	1.00	51.33	C
ATOM	2420	CE	LYS	A	442	76.086	37.716	4.431	1.00	54.42	C
ATOM	2421	NZ	LYS	A	442	75.115	36.573	4.373	1.00	55.91	N
ATOM	2422	N	LEU	A	443	75.393	42.200	7.605	1.00	42.94	N
ATOM	2423	CA	LEU	A	443	75.421	42.568	9.018	1.00	41.75	C
ATOM	2424	C	LEU	A	443	76.697	42.133	9.746	1.00	42.03	C
ATOM	2425	O	LEU	A	443	77.295	42.912	10.485	1.00	40.47	O
ATOM	2426	CB	LEU	A	443	74.201	41.968	9.726	1.00	40.09	C
ATOM	2427	CG	LEU	A	443	74.055	42.185	11.238	1.00	39.89	C
ATOM	2428	CD1	LEU	A	443	72.596	42.020	11.640	1.00	38.06	C
ATOM	2429	CD2	LEU	A	443	74.937	41.200	11.997	1.00	38.79	C
ATOM	2430	N	LYS	A	444	77.108	40.890	9.522	1.00	42.70	N
ATOM	2431	CA	LYS	A	444	78.281	40.315	10.178	1.00	44.85	C
ATOM	2432	C	LYS	A	444	79.577	41.134	10.229	1.00	45.18	C
ATOM	2433	O	LYS	A	444	80.073	41.445	11.314	1.00	44.50	O
ATOM	2434	CB	LYS	A	444	78.595	38.945	9.571	1.00	46.48	C
ATOM	2435	CG	LYS	A	444	79.616	38.150	10.374	1.00	50.45	C
ATOM	2436	CD	LYS	A	444	79.867	36.779	9.768	1.00	53.23	C
ATOM	2437	CE	LYS	A	444	80.731	35.935	10.688	1.00	54.88	C
ATOM	2438	NZ	LYS	A	444	82.030	36.605	10.975	1.00	55.49	N
ATOM	2439	N	ASP	A	445	80.134	41.466	9.068	1.00	45.06	N
ATOM	2440	CA	ASP	A	445	81.388	42.212	9.017	1.00	45.21	C
ATOM	2441	C	ASP	A	445	81.284	43.592	9.636	1.00	43.85	C
ATOM	2442	O	ASP	A	445	82.255	44.105	10.192	1.00	43.92	O
ATOM	2443	CB	ASP	A	445	81.880	42.349	7.573	1.00	48.38	C
ATOM	2444	CG	ASP	A	445	82.108	41.005	6.902	1.00	51.51	C
ATOM	2445	OD1	ASP	A	445	82.776	40.133	7.507	1.00	52.73	O
ATOM	2446	OD2	ASP	A	445	81.620	40.825	5.766	1.00	53.93	O

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ATOM	2447	N	ASN A 446	80.110	44.195	9.533	1.00	41.34	N
ATOM	2448	CA	ASN A 446	79.900	45.522	10.086	1.00	40.70	C
ATOM	2449	C	ASN A 446	79.815	45.501	11.605	1.00	39.56	C
ATOM	2450	O	ASN A 446	80.439	46.318	12.273	1.00	40.02	O
ATOM	2451	CB	ASN A 446	78.637	46.126	9.491	1.00	40.72	C
ATOM	2452	CG	ASN A 446	78.823	46.520	8.046	1.00	41.93	C
ATOM	2453	OD1	ASN A 446	79.347	47.601	7.748	1.00	42.76	O
ATOM	2454	ND2	ASN A 446	78.416	45.640	7.134	1.00	39.05	N
ATOM	2455	N	VAL A 447	79.039	44.571	12.146	1.00	38.14	N
ATOM	2456	CA	VAL A 447	78.901	44.450	13.590	1.00	38.14	C
ATOM	2457	C	VAL A 447	80.251	44.071	14.215	1.00	38.90	C
ATOM	2458	O	VAL A 447	80.594	44.534	15.295	1.00	38.04	O
ATOM	2459	CB	VAL A 447	77.837	43.386	13.952	1.00	37.40	C
ATOM	2460	CG1	VAL A 447	77.891	43.065	15.437	1.00	37.24	C
ATOM	2461	CG2	VAL A 447	76.454	43.899	13.579	1.00	36.23	C
ATOM	2462	N	GLU A 448	81.018	43.235	13.524	1.00	39.10	N
ATOM	2463	CA	GLU A 448	82.313	42.826	14.039	1.00	39.82	C
ATOM	2464	C	GLU A 448	83.247	44.036	14.100	1.00	37.84	C
ATOM	2465	O	GLU A 448	83.963	44.222	15.078	1.00	36.51	O
ATOM	2466	CB	GLU A 448	82.917	41.728	13.153	1.00	42.41	C
ATOM	2467	CG	GLU A 448	84.226	41.149	13.677	1.00	48.39	C
ATOM	2468	CD	GLU A 448	84.802	40.073	12.760	1.00	53.42	C
ATOM	2469	OE1	GLU A 448	85.409	40.422	11.718	1.00	53.76	O
ATOM	2470	OE2	GLU A 448	84.634	38.871	13.078	1.00	56.37	O
ATOM	2471	N	ALA A 449	83.235	44.854	13.053	1.00	36.52	N
ATOM	2472	CA	ALA A 449	84.081	46.045	13.006	1.00	36.71	C
ATOM	2473	C	ALA A 449	83.704	47.016	14.122	1.00	36.23	C
ATOM	2474	O	ALA A 449	84.572	47.530	14.823	1.00	36.73	O
ATOM	2475	CB	ALA A 449	83.951	46.741	11.646	1.00	34.97	C
ATOM	2476	N	SER A 450	82.406	47.262	14.277	1.00	34.72	N
ATOM	2477	CA	SER A 450	81.914	48.166	15.310	1.00	34.31	C
ATOM	2478	C	SER A 450	82.313	47.717	16.714	1.00	34.50	C
ATOM	2479	O	SER A 450	82.868	48.501	17.493	1.00	31.24	O
ATOM	2480	CB	SER A 450	80.387	48.279	15.235	1.00	33.37	C
ATOM	2481	OG	SER A 450	79.991	49.068	14.130	1.00	33.43	O
ATOM	2482	N	LEU A 451	82.043	46.450	17.026	1.00	34.30	N
ATOM	2483	CA	LEU A 451	82.348	45.923	18.346	1.00	35.10	C
ATOM	2484	C	LEU A 451	83.838	45.784	18.631	1.00	36.71	C
ATOM	2485	O	LEU A 451	84.245	45.789	19.791	1.00	36.58	O
ATOM	2486	CB	LEU A 451	81.621	44.596	18.565	1.00	34.20	C
ATOM	2487	CG	LEU A 451	80.095	44.766	18.562	1.00	34.08	C
ATOM	2488	CD1	LEU A 451	79.423	43.457	18.926	1.00	32.06	C
ATOM	2489	CD2	LEU A 451	79.693	45.861	19.543	1.00	32.22	C
ATOM	2490	N	ASN A 452	84.655	45.665	17.588	1.00	37.71	N
ATOM	2491	CA	ASN A 452	86.089	45.579	17.811	1.00	39.20	C
ATOM	2492	C	ASN A 452	86.536	46.934	18.347	1.00	38.74	C
ATOM	2493	O	ASN A 452	87.394	47.009	19.231	1.00	38.71	O
ATOM	2494	CB	ASN A 452	86.853	45.263	16.523	1.00	40.36	C
ATOM	2495	CG	ASN A 452	86.888	43.781	16.215	1.00	44.54	C
ATOM	2496	OD1	ASN A 452	86.761	42.940	17.113	1.00	46.29	O
ATOM	2497	ND2	ASN A 452	87.085	43.447	14.941	1.00	46.83	N
ATOM	2498	N	LYS A 453	85.949	48.001	17.812	1.00	37.17	N
ATOM	2499	CA	LYS A 453	86.292	49.347	18.256	1.00	37.39	C
ATOM	2500	C	LYS A 453	85.809	49.571	19.685	1.00	35.35	C
ATOM	2501	O	LYS A 453	86.501	50.197	20.481	1.00	35.05	O
ATOM	2502	CB	LYS A 453	85.700	50.395	17.303	1.00	38.34	C
ATOM	2503	CG	LYS A 453	86.488	50.492	15.995	1.00	42.57	C



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ATOM	2504	CD	LYS	A	453	85.717	51.157	14.858	1.00	44.00	C
ATOM	2505	CE	LYS	A	453	85.478	52.635	15.094	1.00	45.69	C
ATOM	2506	NZ	LYS	A	453	84.699	53.222	13.962	1.00	46.71	N
ATOM	2507	N	VAL	A	454	84.631	49.048	20.008	1.00	32.74	N
ATOM	2508	CA	VAL	A	454	84.093	49.188	21.352	1.00	31.66	C
ATOM	2509	C	VAL	A	454	85.019	48.455	22.328	1.00	32.27	C
ATOM	2510	O	VAL	A	454	85.418	49.007	23.358	1.00	30.47	O
ATOM	2511	CB	VAL	A	454	82.663	48.597	21.455	1.00	31.71	C
ATOM	2512	CG1	VAL	A	454	82.225	48.527	22.920	1.00	30.29	C
ATOM	2513	CG2	VAL	A	454	81.680	49.459	20.651	1.00	30.64	C
ATOM	2514	N	LYS	A	455	85.365	47.216	21.989	1.00	32.48	N
ATOM	2515	CA	LYS	A	455	86.245	46.402	22.828	1.00	34.26	C
ATOM	2516	C	LYS	A	455	87.589	47.081	23.053	1.00	34.74	C
ATOM	2517	O	LYS	A	455	88.123	47.081	24.162	1.00	34.39	O
ATOM	2518	CB	LYS	A	455	86.483	45.035	22.182	1.00	34.75	C
ATOM	2519	CG	LYS	A	455	85.336	44.055	22.297	1.00	35.60	C
ATOM	2520	CD	LYS	A	455	85.607	42.860	21.395	1.00	38.09	C
ATOM	2521	CE	LYS	A	455	84.529	41.811	21.508	1.00	41.48	C
ATOM	2522	NZ	LYS	A	455	84.809	40.638	20.627	1.00	41.09	N
ATOM	2523	N	SER	A	456	88.140	47.652	21.989	1.00	35.13	N
ATOM	2524	CA	SER	A	456	89.421	48.327	22.090	1.00	36.02	C
ATOM	2525	C	SER	A	456	89.313	49.533	23.031	1.00	35.16	C
ATOM	2526	O	SER	A	456	90.171	49.744	23.890	1.00	33.17	O
ATOM	2527	CB	SER	A	456	89.888	48.764	20.702	1.00	36.46	C
ATOM	2528	OG	SER	A	456	91.172	49.341	20.779	1.00	39.49	O
ATOM	2529	N	THR	A	457	88.254	50.320	22.875	1.00	33.64	N
ATOM	2530	CA	THR	A	457	88.056	51.478	23.734	1.00	33.01	C
ATOM	2531	C	THR	A	457	87.863	51.029	25.182	1.00	32.03	C
ATOM	2532	O	THR	A	457	88.352	51.672	26.108	1.00	32.59	O
ATOM	2533	CB	THR	A	457	86.835	52.297	23.286	1.00	32.27	C
ATOM	2534	OG1	THR	A	457	87.050	52.756	21.949	1.00	34.93	O
ATOM	2535	CG2	THR	A	457	86.624	53.497	24.193	1.00	29.23	C
ATOM	2536	N	MET	A	458	87.150	49.926	25.379	1.00	31.95	N
ATOM	2537	CA	MET	A	458	86.925	49.419	26.723	1.00	30.89	C
ATOM	2538	C	MET	A	458	88.256	49.114	27.407	1.00	32.55	C
ATOM	2539	O	MET	A	458	88.426	49.391	28.598	1.00	31.39	O
ATOM	2540	CB	MET	A	458	86.031	48.179	26.683	1.00	30.61	C
ATOM	2541	CG	MET	A	458	84.548	48.518	26.564	1.00	28.50	C
ATOM	2542	SD	MET	A	458	83.488	47.100	26.262	1.00	29.80	S
ATOM	2543	CE	MET	A	458	83.570	46.223	27.839	1.00	27.13	C
ATOM	2544	N	CYS	A	459	89.211	48.568	26.660	1.00	32.81	N
ATOM	2545	CA	CYS	A	459	90.508	48.281	27.257	1.00	34.73	C
ATOM	2546	C	CYS	A	459	91.260	49.572	27.583	1.00	34.20	C
ATOM	2547	O	CYS	A	459	91.998	49.620	28.566	1.00	33.88	O
ATOM	2548	CB	CYS	A	459	91.347	47.380	26.350	1.00	36.62	C
ATOM	2549	SG	CYS	A	459	90.944	45.616	26.569	1.00	40.92	S
ATOM	2550	N	ASN	A	460	91.075	50.610	26.766	1.00	32.61	N
ATOM	2551	CA	ASN	A	460	91.721	51.892	27.034	1.00	32.54	C
ATOM	2552	C	ASN	A	460	91.176	52.381	28.368	1.00	31.81	C
ATOM	2553	O	ASN	A	460	91.853	53.091	29.098	1.00	32.53	O
ATOM	2554	CB	ASN	A	460	91.371	52.947	25.976	1.00	33.21	C
ATOM	2555	CG	ASN	A	460	92.034	52.693	24.646	1.00	35.78	C
ATOM	2556	OD1	ASN	A	460	91.356	52.543	23.633	1.00	36.50	O
ATOM	2557	ND2	ASN	A	460	93.365	52.648	24.634	1.00	34.40	N
ATOM	2558	N	CYS	A	461	89.932	52.010	28.668	1.00	31.68	N
ATOM	2559	CA	CYS	A	461	89.285	52.423	29.907	1.00	31.03	C
ATOM	2560	C	CYS	A	461	89.515	51.437	31.053	1.00	31.06	C

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ATOM	2561	O	CYS A 461	89.005	51.630	32.146	1.00	32.13	O
ATOM	2562	CB	CYS A 461	87.777	52.617	29.675	1.00	32.30	C
ATOM	2563	SG	CYS A 461	87.364	53.913	28.455	1.00	34.10	S
ATOM	2564	N	GLY A 462	90.281	50.381	30.795	1.00	31.97	N
ATOM	2565	CA	GLY A 462	90.569	49.393	31.822	1.00	31.72	C
ATOM	2566	C	GLY A 462	89.412	48.464	32.149	1.00	32.82	C
ATOM	2567	O	GLY A 462	89.277	47.995	33.282	1.00	32.24	O
ATOM	2568	N	ALA A 463	88.588	48.171	31.151	1.00	31.78	N
ATOM	2569	CA	ALA A 463	87.427	47.320	31.362	1.00	31.54	C
ATOM	2570	C	ALA A 463	87.420	46.075	30.484	1.00	32.00	C
ATOM	2571	O	ALA A 463	87.657	46.150	29.278	1.00	31.09	O
ATOM	2572	CB	ALA A 463	86.160	48.132	31.126	1.00	30.25	C
ATOM	2573	N	LEU A 464	87.152	44.928	31.102	1.00	32.25	N
ATOM	2574	CA	LEU A 464	87.095	43.661	30.377	1.00	33.90	C
ATOM	2575	C	LEU A 464	85.652	43.241	30.158	1.00	32.84	C
ATOM	2576	O	LEU A 464	85.380	42.324	29.386	1.00	34.74	O
ATOM	2577	CB	LEU A 464	87.829	42.550	31.144	1.00	34.92	C
ATOM	2578	CG	LEU A 464	89.345	42.457	30.945	1.00	36.98	C
ATOM	2579	CD1	LEU A 464	89.906	41.276	31.739	1.00	38.71	C
ATOM	2580	CD2	LEU A 464	89.647	42.278	29.470	1.00	37.33	C
ATOM	2581	N	THR A 465	84.732	43.906	30.850	1.00	31.76	N
ATOM	2582	CA	THR A 465	83.312	43.602	30.734	1.00	30.63	C
ATOM	2583	C	THR A 465	82.499	44.887	30.760	1.00	31.08	C
ATOM	2584	O	THR A 465	83.005	45.953	31.122	1.00	29.95	O
ATOM	2585	CB	THR A 465	82.835	42.718	31.891	1.00	31.43	C
ATOM	2586	OG1	THR A 465	82.906	43.464	33.110	1.00	32.51	O
ATOM	2587	CG2	THR A 465	83.710	41.464	32.010	1.00	30.28	C
ATOM	2588	N	ILE A 466	81.234	44.791	30.377	1.00	29.59	N
ATOM	2589	CA	ILE A 466	80.386	45.965	30.376	1.00	28.97	C
ATOM	2590	C	ILE A 466	80.180	46.491	31.797	1.00	28.90	C
ATOM	2591	O	ILE A 466	80.254	47.696	32.034	1.00	29.22	O
ATOM	2592	CB	ILE A 466	79.035	45.662	29.695	1.00	29.12	C
ATOM	2593	CG1	ILE A 466	79.270	45.502	28.187	1.00	27.85	C
ATOM	2594	CG2	ILE A 466	78.028	46.770	29.985	1.00	26.21	C
ATOM	2595	CD1	ILE A 466	78.052	45.094	27.404	1.00	27.38	C
ATOM	2596	N	PRO A 467	79.923	45.597	32.765	1.00	28.55	N
ATOM	2597	CA	PRO A 467	79.733	46.105	34.125	1.00	28.14	C
ATOM	2598	C	PRO A 467	80.986	46.813	34.642	1.00	29.41	C
ATOM	2599	O	PRO A 467	80.905	47.805	35.373	1.00	28.53	O
ATOM	2600	CB	PRO A 467	79.405	44.842	34.919	1.00	29.15	C
ATOM	2601	CG	PRO A 467	78.676	43.992	33.890	1.00	28.98	C
ATOM	2602	CD	PRO A 467	79.588	44.163	32.688	1.00	27.09	C
ATOM	2603	N	GLN A 468	82.151	46.314	34.253	1.00	30.32	N
ATOM	2604	CA	GLN A 468	83.386	46.929	34.705	1.00	32.43	C
ATOM	2605	C	GLN A 468	83.566	48.299	34.049	1.00	32.77	C
ATOM	2606	O	GLN A 468	84.100	49.233	34.657	1.00	32.94	O
ATOM	2607	CB	GLN A 468	84.561	46.006	34.390	1.00	34.93	C
ATOM	2608	CG	GLN A 468	85.869	46.461	34.969	1.00	36.80	C
ATOM	2609	CD	GLN A 468	86.912	45.364	34.940	1.00	37.36	C
ATOM	2610	OE1	GLN A 468	87.016	44.611	33.971	1.00	33.81	O
ATOM	2611	NE2	GLN A 468	87.703	45.281	36.000	1.00	38.34	N
ATOM	2612	N	LEU A 469	83.106	48.418	32.808	1.00	31.40	N
ATOM	2613	CA	LEU A 469	83.191	49.672	32.082	1.00	30.05	C
ATOM	2614	C	LEU A 469	82.263	50.700	32.729	1.00	29.95	C
ATOM	2615	O	LEU A 469	82.628	51.862	32.899	1.00	29.45	O
ATOM	2616	CB	LEU A 469	82.780	49.471	30.620	1.00	30.63	C
ATOM	2617	CG	LEU A 469	82.579	50.765	29.819	1.00	32.08	C

ATOM	2618	CD1	LEU	A	469	83.925	51.423	29.568	1.00	29.55	C
ATOM	2619	CD2	LEU	A	469	81.882	50.454	28.493	1.00	32.46	C
ATOM	2620	N	GLN	A	470	81.062	50.267	33.092	1.00	29.40	N
ATOM	2621	CA	GLN	A	470	80.089	51.169	33.697	1.00	31.46	C
ATOM	2622	C	GLN	A	470	80.599	51.680	35.039	1.00	33.28	C
ATOM	2623	O	GLN	A	470	80.275	52.790	35.479	1.00	32.37	O
ATOM	2624	CB	GLN	A	470	78.748	50.444	33.859	1.00	31.66	C
ATOM	2625	CG	GLN	A	470	78.209	49.929	32.515	1.00	32.34	C
ATOM	2626	CD	GLN	A	470	76.891	49.192	32.633	1.00	33.38	C
ATOM	2627	OE1	GLN	A	470	76.671	48.454	33.585	1.00	34.59	O
ATOM	2628	NE2	GLN	A	470	76.017	49.375	31.652	1.00	31.58	N
ATOM	2629	N	SER	A	471	81.435	50.870	35.668	1.00	33.02	N
ATOM	2630	CA	SER	A	471	81.997	51.222	36.955	1.00	34.85	C
ATOM	2631	C	SER	A	471	83.239	52.119	36.863	1.00	33.52	C
ATOM	2632	O	SER	A	471	83.374	53.070	37.625	1.00	34.04	O
ATOM	2633	CB	SER	A	471	82.329	49.934	37.722	1.00	34.20	C
ATOM	2634	OG	SER	A	471	82.985	50.221	38.940	1.00	40.00	O
ATOM	2635	N	LYS	A	472	84.121	51.837	35.910	1.00	33.54	N
ATOM	2636	CA	LYS	A	472	85.375	52.582	35.774	1.00	33.02	C
ATOM	2637	C	LYS	A	472	85.437	53.746	34.784	1.00	32.17	C
ATOM	2638	O	LYS	A	472	86.312	54.599	34.904	1.00	32.35	O
ATOM	2639	CB	LYS	A	472	86.505	51.605	35.431	1.00	33.39	C
ATOM	2640	CG	LYS	A	472	86.599	50.420	36.374	1.00	35.66	C
ATOM	2641	CD	LYS	A	472	87.597	49.369	35.885	1.00	37.76	C
ATOM	2642	CE	LYS	A	472	89.036	49.761	36.185	1.00	40.51	C
ATOM	2643	NZ	LYS	A	472	90.004	48.705	35.750	1.00	41.85	N
ATOM	2644	N	ALA	A	473	84.538	53.782	33.804	1.00	30.79	N
ATOM	2645	CA	ALA	A	473	84.563	54.849	32.806	1.00	30.86	C
ATOM	2646	C	ALA	A	473	84.644	56.263	33.382	1.00	30.77	C
ATOM	2647	O	ALA	A	473	83.971	56.599	34.358	1.00	31.90	O
ATOM	2648	CB	ALA	A	473	83.343	54.738	31.882	1.00	30.21	C
ATOM	2649	N	LYS	A	474	85.491	57.077	32.762	1.00	31.21	N
ATOM	2650	CA	LYS	A	474	85.685	58.476	33.136	1.00	31.60	C
ATOM	2651	C	LYS	A	474	85.118	59.211	31.930	1.00	32.45	C
ATOM	2652	O	LYS	A	474	85.681	59.165	30.829	1.00	30.42	O
ATOM	2653	CB	LYS	A	474	87.175	58.769	33.326	1.00	30.92	C
ATOM	2654	CG	LYS	A	474	87.773	58.010	34.520	1.00	31.60	C
ATOM	2655	CD	LYS	A	474	89.251	57.668	34.302	1.00	32.08	C
ATOM	2656	CE	LYS	A	474	90.125	58.906	34.302	1.00	32.99	C
ATOM	2657	NZ	LYS	A	474	91.550	58.543	34.039	1.00	33.32	N
ATOM	2658	N	ILE	A	475	83.990	59.875	32.146	1.00	32.69	N
ATOM	2659	CA	ILE	A	475	83.285	60.546	31.066	1.00	33.22	C
ATOM	2660	C	ILE	A	475	83.237	62.056	31.203	1.00	32.93	C
ATOM	2661	O	ILE	A	475	82.713	62.581	32.183	1.00	33.43	O
ATOM	2662	CB	ILE	A	475	81.848	59.991	30.977	1.00	33.86	C
ATOM	2663	CG1	ILE	A	475	81.907	58.456	30.907	1.00	34.55	C
ATOM	2664	CG2	ILE	A	475	81.128	60.569	29.758	1.00	34.88	C
ATOM	2665	CD1	ILE	A	475	80.562	57.756	31.036	1.00	33.21	C
ATOM	2666	N	THR	A	476	83.786	62.751	30.212	1.00	32.44	N
ATOM	2667	CA	THR	A	476	83.792	64.206	30.239	1.00	31.82	C
ATOM	2668	C	THR	A	476	82.921	64.803	29.154	1.00	31.41	C
ATOM	2669	O	THR	A	476	82.734	64.225	28.084	1.00	29.60	O
ATOM	2670	CB	THR	A	476	85.212	64.803	30.054	1.00	31.71	C
ATOM	2671	OG1	THR	A	476	85.143	66.233	30.185	1.00	32.39	O
ATOM	2672	CG2	THR	A	476	85.770	64.464	28.665	1.00	28.14	C
ATOM	2673	N	LEU	A	477	82.391	65.977	29.461	1.00	32.16	N
ATOM	2674	CA	LEU	A	477	81.569	66.737	28.542	1.00	34.25	C

ATOM	2675	C	LEU	A	477	82.595	67.593	27.787	1.00	34.56	C
ATOM	2676	O	LEU	A	477	83.646	67.907	28.345	1.00	32.54	O
ATOM	2677	CB	LEU	A	477	80.622	67.621	29.357	1.00	35.42	C
ATOM	2678	CG	LEU	A	477	79.408	68.279	28.719	1.00	37.43	C
ATOM	2679	CD1	LEU	A	477	78.496	67.223	28.120	1.00	34.96	C
ATOM	2680	CD2	LEU	A	477	78.667	69.082	29.798	1.00	39.05	C
ATOM	2681	N	VAL	A	478	82.320	67.941	26.531	1.00	35.71	N
ATOM	2682	CA	VAL	A	478	83.242	68.778	25.761	1.00	38.92	C
ATOM	2683	C	VAL	A	478	82.573	70.119	25.463	1.00	41.05	C
ATOM	2684	O	VAL	A	478	81.359	70.187	25.298	1.00	40.84	O
ATOM	2685	CB	VAL	A	478	83.659	68.111	24.428	1.00	39.90	C
ATOM	2686	CG1	VAL	A	478	84.015	66.662	24.672	1.00	40.76	C
ATOM	2687	CG2	VAL	A	478	82.551	68.237	23.400	1.00	41.86	C
ATOM	2688	N	SER	A	479	83.370	71.181	25.386	1.00	43.62	N
ATOM	2689	CA	SER	A	479	82.849	72.525	25.147	1.00	47.07	C
ATOM	2690	C	SER	A	479	82.082	72.745	23.854	1.00	50.19	C
ATOM	2691	O	SER	A	479	82.356	72.129	22.821	1.00	49.40	O
ATOM	2692	CB	SER	A	479	83.979	73.553	25.207	1.00	46.48	C
ATOM	2693	OG	SER	A	479	84.904	73.327	24.160	1.00	46.18	O
ATOM	2694	N	SER	A	480	81.124	73.662	23.933	1.00	54.55	N
ATOM	2695	CA	SER	A	480	80.297	74.036	22.799	1.00	59.07	C
ATOM	2696	C	SER	A	480	81.192	74.534	21.668	1.00	61.48	C
ATOM	2697	O	SER	A	480	81.036	74.146	20.505	1.00	61.36	O
ATOM	2698	CB	SER	A	480	79.327	75.143	23.224	1.00	59.36	C
ATOM	2699	OG	SER	A	480	78.625	75.669	22.113	1.00	62.01	O
ATOM	2700	N	VAL	A	481	82.145	75.382	22.040	1.00	64.75	N
ATOM	2701	CA	VAL	A	481	83.088	75.982	21.104	1.00	67.50	C
ATOM	2702	C	VAL	A	481	84.162	75.015	20.611	1.00	69.03	C
ATOM	2703	O	VAL	A	481	85.113	75.432	19.949	1.00	69.98	O
ATOM	2704	CB	VAL	A	481	83.804	77.179	21.753	1.00	67.66	C
ATOM	2705	CG1	VAL	A	481	84.155	78.211	20.693	1.00	68.62	C
ATOM	2706	CG2	VAL	A	481	82.935	77.775	22.841	1.00	67.94	C
ATOM	2707	N	SER	A	482	84.016	73.731	20.922	1.00	70.23	N
ATOM	2708	CA	SER	A	482	85.010	72.749	20.504	1.00	71.93	C
ATOM	2709	C	SER	A	482	84.445	71.675	19.590	1.00	73.15	C
ATOM	2710	O	SER	A	482	83.495	71.916	18.841	1.00	73.05	O
ATOM	2711	CB	SER	A	482	85.636	72.068	21.724	1.00	72.51	C
ATOM	2712	OG	SER	A	482	84.711	71.185	22.344	1.00	72.87	O
ATOM	2713	N	ILE	A	483	85.048	70.487	19.686	1.00	74.34	N
ATOM	2714	CA	ILE	A	483	84.698	69.305	18.899	1.00	75.21	C
ATOM	2715	C	ILE	A	483	85.510	69.316	17.609	1.00	75.65	C
ATOM	2716	O	ILE	A	483	85.821	68.263	17.049	1.00	75.17	O
ATOM	2717	CB	ILE	A	483	83.189	69.254	18.536	1.00	75.76	C
ATOM	2718	CG1	ILE	A	483	82.338	69.219	19.809	1.00	75.65	C
ATOM	2719	CG2	ILE	A	483	82.903	68.025	17.680	1.00	75.47	C
ATOM	2720	CD1	ILE	A	483	80.852	69.350	19.554	1.00	74.79	C
ATOM	2721	N	VAL	A	484	85.854	70.517	17.150	1.00	76.42	N
ATOM	2722	CA	VAL	A	484	86.630	70.686	15.924	1.00	77.07	C
ATOM	2723	C	VAL	A	484	88.022	70.077	16.085	1.00	77.20	C
ATOM	2724	O	VAL	A	484	88.540	69.442	15.163	1.00	77.05	O
ATOM	2725	CB	VAL	A	484	86.773	72.186	15.549	1.00	77.33	C
ATOM	2726	CG1	VAL	A	484	87.463	72.322	14.193	1.00	77.06	C
ATOM	2727	CG2	VAL	A	484	85.401	72.853	15.521	1.00	76.24	C
ATOM	2728	N	GLU	A	485	88.620	70.272	17.259	1.00	77.14	N
ATOM	2729	CA	GLU	A	485	89.948	69.733	17.545	1.00	77.36	C
ATOM	2730	C	GLU	A	485	89.935	68.210	17.439	1.00	77.78	C
ATOM	2731	O	GLU	A	485	90.907	67.599	16.991	1.00	77.16	O

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ATOM	2732	CB	GLU	A	485	90.398	70.127	18.957	1.00	76.63	C
ATOM	2733	CG	GLU	A	485	91.730	69.499	19.372	1.00	76.08	C
ATOM	2734	CD	GLU	A	485	92.030	69.654	20.854	1.00	75.36	C
ATOM	2735	OE1	GLU	A	485	91.261	69.135	21.687	1.00	75.07	O
ATOM	2736	OE2	GLU	A	485	93.041	70.294	21.190	1.00	75.66	O
ATOM	2737	N	GLY	A	486	88.824	67.610	17.861	1.00	78.37	N
ATOM	2738	CA	GLY	A	486	88.682	66.165	17.831	1.00	79.06	C
ATOM	2739	C	GLY	A	486	88.873	65.533	16.466	1.00	79.40	C
ATOM	2740	O	GLY	A	486	89.530	64.499	16.348	1.00	79.68	O
ATOM	2741	N	GLY	A	487	88.295	66.145	15.435	1.00	79.72	N
ATOM	2742	CA	GLY	A	487	88.428	65.611	14.091	1.00	79.91	C
ATOM	2743	C	GLY	A	487	89.646	66.164	13.376	1.00	80.25	C
ATOM	2744	O	GLY	A	487	90.467	66.857	13.982	1.00	80.14	O
ATOM	2745	N	ALA	A	488	89.773	65.854	12.088	1.00	80.34	N
ATOM	2746	CA	ALA	A	488	90.896	66.341	11.292	1.00	80.30	C
ATOM	2747	C	ALA	A	488	90.694	67.833	11.037	1.00	80.42	C
ATOM	2748	O	ALA	A	488	89.584	68.272	10.730	1.00	79.93	O
ATOM	2749	CB	ALA	A	488	90.972	65.584	9.969	1.00	79.95	C
ATOM	2750	N	HIS	A	489	91.763	68.612	11.165	1.00	80.61	N
ATOM	2751	CA	HIS	A	489	91.661	70.052	10.957	1.00	81.04	C
ATOM	2752	C	HIS	A	489	92.937	70.687	10.424	1.00	81.07	C
ATOM	2753	O	HIS	A	489	94.046	70.253	10.742	1.00	80.28	O
ATOM	2754	CB	HIS	A	489	91.271	70.743	12.266	1.00	81.48	C
ATOM	2755	CG	HIS	A	489	92.196	70.442	13.405	1.00	81.91	C
ATOM	2756	ND1	HIS	A	489	92.241	69.210	14.020	1.00	81.93	N
ATOM	2757	CD2	HIS	A	489	93.121	71.209	14.030	1.00	81.89	C
ATOM	2758	CE1	HIS	A	489	93.153	69.231	14.976	1.00	81.92	C
ATOM	2759	NE2	HIS	A	489	93.702	70.432	15.002	1.00	81.66	N
ATOM	2760	N	ASP	A	490	92.758	71.727	9.614	1.00	81.38	N
ATOM	2761	CA	ASP	A	490	93.870	72.467	9.027	1.00	81.57	C
ATOM	2762	C	ASP	A	490	94.730	71.605	8.111	1.00	81.88	C
ATOM	2763	O	ASP	A	490	95.940	71.810	7.997	1.00	81.99	O
ATOM	2764	CB	ASP	A	490	94.721	73.079	10.141	1.00	81.37	C
ATOM	2765	CG	ASP	A	490	93.915	73.990	11.046	1.00	81.51	C
ATOM	2766	OD1	ASP	A	490	93.484	75.069	10.579	1.00	81.11	O
ATOM	2767	OD2	ASP	A	490	93.701	73.622	12.220	1.00	81.49	O
ATOM	2768	N	VAL	A	491	94.093	70.638	7.462	1.00	81.98	N
ATOM	2769	CA	VAL	A	491	94.779	69.748	6.537	1.00	82.24	C
ATOM	2770	C	VAL	A	491	93.841	69.392	5.390	1.00	82.41	C
ATOM	2771	O	VAL	A	491	92.621	69.331	5.566	1.00	81.92	O
ATOM	2772	CB	VAL	A	491	95.252	68.440	7.231	1.00	82.15	C
ATOM	2773	CG1	VAL	A	491	96.314	68.755	8.273	1.00	82.08	C
ATOM	2774	CG2	VAL	A	491	94.069	67.727	7.873	1.00	82.18	C
ATOM	2775	N	ILE	A	492	94.419	69.169	4.215	1.00	82.73	N
ATOM	2776	CA	ILE	A	492	93.651	68.816	3.029	1.00	83.15	C
ATOM	2777	C	ILE	A	492	93.731	67.309	2.792	1.00	83.71	C
ATOM	2778	O	ILE	A	492	94.558	66.887	1.954	1.00	84.19	O
ATOM	2779	CB	ILE	A	492	94.180	69.565	1.782	1.00	83.08	C
ATOM	2780	CG1	ILE	A	492	94.136	71.075	2.032	1.00	82.87	C
ATOM	2781	CG2	ILE	A	492	93.342	69.211	0.560	1.00	82.77	C
ATOM	2782	CD1	ILE	A	492	94.640	71.911	0.874	1.00	83.43	C
TER	2783		ILE	A	492						
HETATM	2784	NA	NA		901	65.965	62.918	15.945	1.00	69.25	NA
HETATM	2785	K	K	A	900	94.585	53.172	29.328	0.75	36.10	K
HETATM	2786	P	RVP		602	67.957	55.327	15.029	1.00	40.98	P
HETATM	2787	O1P	RVP		602	67.605	55.290	13.581	1.00	40.82	O
HETATM	2788	O2P	RVP		602	68.778	54.118	15.349	1.00	40.06	O

HETATM	2789	O3P	RVP	602	68.738	56.618	15.412	1.00	40.73	O
HETATM	2790	O5*	RVP	602	66.712	55.356	16.019	1.00	39.48	O
HETATM	2791	C5*	RVP	602	65.743	54.315	15.953	1.00	38.43	C
HETATM	2792	C4*	RVP	602	64.678	54.509	16.989	1.00	38.00	C
HETATM	2793	O4*	RVP	602	63.938	55.721	16.576	1.00	38.49	O
HETATM	2794	C3*	RVP	602	63.577	53.475	17.169	1.00	36.61	C
HETATM	2795	O3*	RVP	602	63.978	52.319	17.881	1.00	35.40	O
HETATM	2796	C2*	RVP	602	62.504	54.269	17.841	1.00	36.75	C
HETATM	2797	O2*	RVP	602	62.653	54.352	19.240	1.00	36.68	O
HETATM	2798	C1*	RVP	602	62.606	55.609	17.106	1.00	38.31	C
HETATM	2799	N9	RVP	602	61.637	55.746	15.950	1.00	40.51	N
HETATM	2800	C8	RVP	602	61.076	54.833	15.070	1.00	40.32	C
HETATM	2801	N7	RVP	602	60.285	55.383	14.214	1.00	40.61	N
HETATM	2802	C5	RVP	602	60.285	56.713	14.493	1.00	41.77	C
HETATM	2803	C6	RVP	602	59.586	57.820	13.858	1.00	41.63	C
HETATM	2804	O6	RVP	602	58.824	57.752	12.898	1.00	40.85	O
HETATM	2805	N1	RVP	602	59.848	59.109	14.451	1.00	42.44	N
HETATM	2806	N4	RVP	602	61.119	56.976	15.575	1.00	41.17	N
HETATM	2807	C1	MOA	600	60.515	58.824	19.697	0.50	46.30	C
HETATM	2808	C2	MOA	600	55.761	57.322	16.893	0.50	49.27	C
HETATM	2809	C3	MOA	600	54.536	56.866	16.570	0.50	50.25	C
HETATM	2810	C4	MOA	600	53.366	57.590	17.224	0.50	51.18	C
HETATM	2811	C5	MOA	600	52.702	56.677	18.266	0.50	52.05	C
HETATM	2812	C6	MOA	600	53.320	56.768	19.656	0.50	52.48	C
HETATM	2813	C7	MOA	600	59.541	53.995	20.040	0.50	45.22	C
HETATM	2814	C8	MOA	600	56.392	53.973	18.496	0.50	45.61	C
HETATM	2815	C9	MOA	600	54.279	55.668	15.641	0.50	50.49	C
HETATM	2816	C10	MOA	600	60.943	56.779	20.807	0.50	45.42	C
HETATM	2817	C11	MOA	600	59.925	56.532	19.711	0.50	45.86	C
HETATM	2818	C12	MOA	600	59.265	55.296	19.328	0.50	45.51	C
HETATM	2819	C13	MOA	600	58.321	55.359	18.230	0.50	45.35	C
HETATM	2820	C14	MOA	600	58.073	56.626	17.563	0.50	46.27	C
HETATM	2821	C15	MOA	600	58.756	57.824	17.978	0.50	45.96	C
HETATM	2822	C16	MOA	600	59.679	57.745	19.060	0.50	46.34	C
HETATM	2823	C17	MOA	600	57.082	56.722	16.411	0.50	47.60	C
HETATM	2824	O1	MOA	600	60.600	59.983	19.446	0.50	47.39	O
HETATM	2825	O2	MOA	600	61.200	58.218	20.669	0.50	46.12	O
HETATM	2826	O3	MOA	600	57.682	54.195	17.849	0.50	44.59	O
HETATM	2827	O4	MOA	600	58.494	59.017	17.318	0.50	45.53	O
HETATM	2828	O5	MOA	600	53.045	57.763	20.364	0.50	53.35	O
HETATM	2829	O6	MOA	600	54.072	55.841	20.036	0.50	50.72	O
HETATM	2830	O	HOH	1	86.937	48.115	13.619	1.00	53.10	O
HETATM	2831	O	HOH	2	66.156	60.715	24.787	1.00	30.04	O
HETATM	2832	O	HOH	3	57.859	59.028	28.431	1.00	32.40	O
HETATM	2833	O	HOH	4	71.017	54.648	22.049	1.00	29.86	O
HETATM	2834	O	HOH	5	59.607	45.471	36.968	1.00	31.13	O
HETATM	2835	O	HOH	6	66.879	48.121	38.970	1.00	31.37	O
HETATM	2836	O	HOH	7	79.892	42.101	29.537	1.00	28.27	O
HETATM	2837	O	HOH	8	75.265	45.936	32.827	1.00	34.43	O
HETATM	2838	O	HOH	9	56.912	79.011	34.524	1.00	32.22	O
HETATM	2839	O	HOH	10	71.224	53.547	14.238	1.00	33.27	O
HETATM	2840	O	HOH	11	87.551	55.794	31.268	1.00	29.17	O
HETATM	2841	O	HOH	12	78.951	48.244	37.321	1.00	38.69	O
HETATM	2842	O	HOH	13	76.535	44.032	31.071	1.00	33.29	O
HETATM	2843	O	HOH	14	77.984	54.327	34.370	1.00	35.16	O
HETATM	2844	O	HOH	15	84.500	53.321	21.118	1.00	31.74	O
HETATM	2845	O	HOH	16	74.544	60.085	37.904	1.00	44.09	O

HETATM	2846	O	HOH	17	88.665	54.024	33.427	1.00	31.82	O
HETATM	2847	O	HOH	18	64.790	41.466	7.903	1.00	37.49	O
HETATM	2848	O	HOH	19	73.871	57.655	36.239	1.00	31.87	O
HETATM	2849	O	HOH	20	58.900	51.481	22.980	1.00	34.30	O
HETATM	2850	O	HOH	21	64.317	56.651	20.399	1.00	39.92	O
HETATM	2851	O	HOH	22	65.490	36.877	34.840	1.00	40.17	O
HETATM	2852	O	HOH	23	60.085	50.861	20.174	1.00	43.72	O
HETATM	2853	O	HOH	24	76.358	52.869	36.274	1.00	39.41	O
HETATM	2854	O	HOH	25	64.918	73.696	32.920	1.00	32.12	O
HETATM	2855	O	HOH	26	56.665	77.507	37.267	1.00	37.89	O
HETATM	2856	O	HOH	27	72.867	38.426	33.907	1.00	35.88	O
HETATM	2857	O	HOH	28	72.686	61.731	21.624	1.00	43.41	O
HETATM	2858	O	HOH	29	67.317	67.438	30.698	1.00	36.92	O
HETATM	2859	O	HOH	30	49.555	44.437	21.119	1.00	42.21	O
HETATM	2860	O	HOH	31	70.551	33.609	27.633	1.00	41.14	O
HETATM	2861	O	HOH	32	76.699	41.425	32.331	1.00	34.07	O
HETATM	2862	O	HOH	33	61.925	50.659	17.855	1.00	31.53	O
HETATM	2863	O	HOH	34	62.610	38.767	34.074	1.00	31.70	O
HETATM	2864	O	HOH	35	56.933	57.813	38.879	1.00	41.65	O
HETATM	2865	O	HOH	36	66.624	37.892	16.896	1.00	37.69	O
HETATM	2866	O	HOH	37	69.286	68.051	32.916	1.00	43.83	O
HETATM	2867	O	HOH	38	53.353	51.944	38.099	1.00	36.77	O
HETATM	2868	O	HOH	39	82.373	67.465	31.922	1.00	39.48	O
HETATM	2869	O	HOH	40	62.969	61.940	37.710	1.00	45.75	O
HETATM	2870	O	HOH	41	60.077	59.723	30.997	1.00	46.18	O
HETATM	2871	O	HOH	42	51.139	46.321	36.000	1.00	41.32	O
HETATM	2872	O	HOH	43	59.604	51.735	16.489	1.00	35.27	O
HETATM	2873	O	HOH	44	61.183	37.811	37.337	1.00	47.18	O
HETATM	2874	O	HOH	45	66.082	58.886	21.454	1.00	35.99	O
HETATM	2875	O	HOH	46	66.187	63.971	21.615	1.00	43.24	O
HETATM	2876	O	HOH	47	68.276	38.487	46.493	1.00	41.00	O
HETATM	2877	O	HOH	48	73.810	65.033	30.854	1.00	44.46	O
HETATM	2878	O	HOH	49	59.036	45.342	5.912	1.00	45.26	O
HETATM	2879	O	HOH	50	58.693	35.801	27.026	1.00	42.44	O
HETATM	2880	O	HOH	51	54.551	73.802	39.044	1.00	44.81	O
HETATM	2881	O	HOH	52	59.942	51.276	9.798	1.00	38.47	O
HETATM	2882	O	HOH	53	75.437	38.984	31.295	1.00	41.54	O
HETATM	2883	O	HOH	54	56.511	41.592	37.450	1.00	50.73	O
HETATM	2884	O	HOH	55	55.967	71.689	16.393	1.00	42.82	O
HETATM	2885	O	HOH	56	79.457	38.647	17.552	1.00	40.99	O
HETATM	2886	O	HOH	57	61.441	73.979	39.270	1.00	51.02	O
HETATM	2887	O	HOH	58	74.980	37.209	10.810	1.00	44.24	O
HETATM	2888	O	HOH	59	87.106	70.131	23.910	1.00	48.62	O
HETATM	2889	O	HOH	60	78.921	72.296	28.132	1.00	44.83	O
HETATM	2890	O	HOH	61	59.217	38.449	34.738	1.00	41.72	O
HETATM	2891	O	HOH	62	62.392	64.439	35.307	1.00	38.87	O
HETATM	2892	O	HOH	63	52.186	54.149	25.895	1.00	39.43	O
HETATM	2893	O	HOH	64	91.884	51.151	35.362	1.00	47.95	O
HETATM	2894	O	HOH	65	74.410	50.817	36.320	1.00	40.80	O
HETATM	2895	O	HOH	66	75.694	70.804	31.847	1.00	45.76	O
HETATM	2896	O	HOH	67	85.562	49.382	39.692	1.00	44.65	O
HETATM	2897	O	HOH	68	50.848	31.856	16.493	1.00	47.42	O
HETATM	2898	O	HOH	69	75.545	38.878	8.328	1.00	39.75	O
HETATM	2899	O	HOH	70	72.184	67.522	32.127	1.00	41.79	O
HETATM	2900	O	HOH	71	81.557	38.617	24.306	1.00	45.21	O
HETATM	2901	O	HOH	72	82.150	63.522	21.264	1.00	45.28	O
HETATM	2902	O	HOH	73	43.465	44.041	23.652	1.00	49.13	O

HETATM	2903	O	HOH	74	65.282	64.106	36.024	1.00	42.80	O
HETATM	2904	O	HOH	75	71.791	56.052	42.026	1.00	43.68	O
HETATM	2905	O	HOH	76	70.611	32.750	38.320	1.00	50.18	O
HETATM	2906	O	HOH	77	65.746	28.372	26.829	1.00	51.32	O
HETATM	2907	O	HOH	78	46.316	49.216	27.478	1.00	49.98	O
HETATM	2908	O	HOH	79	66.218	28.865	15.007	1.00	49.39	O
HETATM	2909	O	HOH	80	45.899	41.751	13.150	1.00	50.35	O
HETATM	2910	O	HOH	81	67.812	59.668	38.963	1.00	53.98	O
HETATM	2911	O	HOH	82	67.783	69.548	38.244	1.00	50.77	O
HETATM	2912	O	HOH	83	90.501	38.801	36.127	1.00	59.97	O
HETATM	2913	O	HOH	84	57.960	65.710	38.116	1.00	51.75	O
HETATM	2914	O	HOH	85	48.770	54.414	37.079	1.00	51.59	O
HETATM	2915	O	HOH	86	54.375	62.285	36.120	1.00	46.20	O
HETATM	2916	O	HOH	87	60.479	39.480	6.892	1.00	48.39	O
HETATM	2917	O	HOH	88	63.400	39.497	6.092	1.00	47.12	O
HETATM	2918	O	HOH	89	49.881	43.115	8.014	1.00	55.16	O
HETATM	2919	O	HOH	90	48.799	31.869	25.511	1.00	54.96	O
HETATM	2920	O	HOH	91	55.226	53.883	40.277	1.00	57.13	O
HETATM	2921	O	HOH	92	84.876	42.783	10.201	1.00	60.19	O
HETATM	2922	O	HOH	93	71.104	57.754	14.563	1.00	50.88	O
HETATM	2923	O	HOH	94	81.517	55.070	13.507	1.00	56.55	O
HETATM	2924	O	HOH	95	69.719	68.895	35.986	1.00	50.06	O
HETATM	2925	O	HOH	96	48.667	81.714	40.322	1.00	56.66	O
HETATM	2926	O	HOH	97	79.523	40.573	32.112	1.00	41.26	O
HETATM	2927	O	HOH	98	50.394	78.735	40.269	1.00	61.03	O
HETATM	2928	O	HOH	99	51.083	76.617	38.073	1.00	50.99	O
HETATM	2929	O	HOH	100	55.631	67.730	37.228	1.00	53.07	O
HETATM	2930	O	HOH	101	63.222	78.551	34.890	1.00	55.30	O
HETATM	2931	O	HOH	102	64.387	81.230	33.819	1.00	60.32	O
HETATM	2932	O	HOH	103	63.693	84.119	34.865	1.00	68.07	O
HETATM	2933	O	HOH	104	75.769	73.295	28.310	1.00	58.02	O
HETATM	2934	O	HOH	105	86.092	39.258	22.649	1.00	56.63	O
HETATM	2935	O	HOH	106	62.744	55.138	1.577	1.00	43.51	O
HETATM	2936	O	HOH	107	74.933	63.024	19.409	1.00	54.22	O
HETATM	2937	O	HOH	108	69.789	45.377	46.398	1.00	46.18	O
HETATM	2938	O	HOH	109	74.595	39.323	37.886	1.00	62.46	O
HETATM	2939	O	HOH	110	73.747	39.642	41.004	1.00	58.85	O
HETATM	2940	O	HOH	111	72.104	32.691	30.025	1.00	49.56	O
HETATM	2941	O	HOH	112	78.793	70.848	25.397	1.00	58.19	O
HETATM	2942	O	HOH	113	73.215	33.284	26.151	1.00	58.62	O
HETATM	2943	O	HOH	114	68.965	43.819	0.725	1.00	52.71	O
HETATM	2944	O	HOH	115	96.151	46.659	27.632	1.00	52.09	O
HETATM	2945	O	HOH	116	97.574	43.766	26.583	1.00	57.72	O
HETATM	2946	O	HOH	117	63.372	31.897	25.790	1.00	49.36	O
HETATM	2947	O	HOH	118	66.211	31.555	26.744	1.00	58.36	O
HETATM	2948	O	HOH	119	63.520	35.235	42.203	1.00	53.59	O
HETATM	2949	O	HOH	120	88.222	37.020	34.672	1.00	51.97	O
CONNECT	202	2549								
CONNECT	2549	202								
CONNECT	2786	2787	2788	2789	2790					
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CONNECT	2791	2790	2792							
CONNECT	2792	2791	2793	2794						
CONNECT	2793	2792	2798							



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 MASTER 509 0 4 13 18 0 0 6 2948 1 46 39  
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 Figure 8  
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 Page 1

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HEADER      OXIDOREDUCTASE                      08-AUG-02    1ME8
TITLE       INOSINE MONOPHOSPHATE DEHYDROGENASE (IMPDH) FROM
TITLE       2 TRITRICHOMONAS FOETUS WITH RVP BOUND
COMPND      MOL_ID: 1;
COMPND      2 MOLECULE: INOSINE-5'-MONOPHOSPHATE DEHYDROGENASE;
COMPND      3 CHAIN: A;
COMPND      4 SYNONYM: IMP DEHYDROGENASE, IMPDH;
COMPND      5 EC: 1.1.1.205;
COMPND      6 ENGINEERED: YES
SOURCE      MOL_ID: 1;
SOURCE      2 ORGANISM_SCIENTIFIC: TRITRICHOMONAS FOETUS;
SOURCE      3 GENE: IMPDH;
SOURCE      4 EXPRESSION_SYSTEM: ESCHERICHIA COLI;
SOURCE      5 EXPRESSION_SYSTEM_COMMON: BACTERIA;
SOURCE      6 EXPRESSION_SYSTEM_STRAIN: H712;
SOURCE      7 EXPRESSION_SYSTEM_VECTOR_TYPE: PLASMID;
SOURCE      8 EXPRESSION_SYSTEM_PLASMID: PBACE
KEYWDS      ALPHA BETA BARREL
EXPDTA      X-RAY DIFFRACTION
AUTHOR      G.L.PROSISE,J.WU,H.LUECKE
JRNL        AUTH   G.L.PROSISE,J.WU,H.LUECKE
JRNL        TITL   CRYSTAL STRUCTURE OF T. FOETUS INOSINE
JRNL        TITL 2 MONOPHOSPHATE DEHYDROGENASE IN COMPLEX WITH THE
JRNL        TITL 3 INHIBITOR RIBAVIRIN REVEALS A CATALYSIS-DEPENDENT
JRNL        TITL 4 ION BINDING SITE
JRNL        REF    TO BE PUBLISHED
JRNL        REFN
REMARK      1
REMARK      2
REMARK      2 RESOLUTION. 1.90 ANGSTROMS.
REMARK      3
REMARK      3 REFINEMENT.
REMARK      3   PROGRAM       : CNS 1.1
REMARK      3   AUTHORS        : BRUNGER,ADAMS,CLORE,DELANO,GROS,GROSSE-
REMARK      3                   : KUNSTLEVE,JIANG,KUSZEWSKI,NILGES, PANNU,
REMARK      3                   : READ,RICE,SIMONSON,WARREN
REMARK      3
REMARK      3 REFINEMENT TARGET : ENGH & HUBER
REMARK      3
REMARK      3 DATA USED IN REFINEMENT.
REMARK      3 RESOLUTION RANGE HIGH (ANGSTROMS) : 1.90
REMARK      3 RESOLUTION RANGE LOW  (ANGSTROMS) : 48.94
REMARK      3 DATA CUTOFF                (SIGMA(F)) : 0.000
REMARK      3 OUTLIER CUTOFF HIGH (RMS(ABS(F))) : NULL
REMARK      3 COMPLETENESS (WORKING+TEST) (%) : 99.4
REMARK      3 NUMBER OF REFLECTIONS           : 50121
REMARK      3
REMARK      3 FIT TO DATA USED IN REFINEMENT.
REMARK      3 CROSS-VALIDATION METHOD           : THROUGHOUT
REMARK      3 FREE R VALUE TEST SET SELECTION : RANDOM
REMARK      3 R VALUE                          (WORKING SET) : 0.243
REMARK      3 FREE R VALUE                     : 0.258
REMARK      3 FREE R VALUE TEST SET SIZE (%)   : 5.000
REMARK      3 FREE R VALUE TEST SET COUNT      : 2523
REMARK      3 ESTIMATED ERROR OF FREE R VALUE  : 0.005
REMARK      3
REMARK      3 FIT IN THE HIGHEST RESOLUTION BIN.

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REMARK 3 TOTAL NUMBER OF BINS USED : 6
REMARK 3 BIN RESOLUTION RANGE HIGH (A) : 1.90
REMARK 3 BIN RESOLUTION RANGE LOW (A) : 2.02
REMARK 3 BIN COMPLETENESS (WORKING+TEST) (%) : 99.90
REMARK 3 REFLECTIONS IN BIN (WORKING SET) : 7832
REMARK 3 BIN R VALUE (WORKING SET) : 0.2820
REMARK 3 BIN FREE R VALUE : 0.2950
REMARK 3 BIN FREE R VALUE TEST SET SIZE (%) : 4.60
REMARK 3 BIN FREE R VALUE TEST SET COUNT : 378
REMARK 3 ESTIMATED ERROR OF BIN FREE R VALUE : 0.015
REMARK 3
REMARK 3 NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK 3 PROTEIN ATOMS : 2727
REMARK 3 NUCLEIC ACID ATOMS : 0
REMARK 3 HETEROGEN ATOMS : 23
REMARK 3 SOLVENT ATOMS : 201
REMARK 3
REMARK 3 B VALUES.
REMARK 3 FROM WILSON PLOT (A**2) : 23.40
REMARK 3 MEAN B VALUE (OVERALL, A**2) : 36.90
REMARK 3 OVERALL ANISOTROPIC B VALUE.
REMARK 3 B11 (A**2) : 0.00000
REMARK 3 B22 (A**2) : 0.00000
REMARK 3 B33 (A**2) : 0.00000
REMARK 3 B12 (A**2) : 0.00000
REMARK 3 B13 (A**2) : 0.00000
REMARK 3 B23 (A**2) : 0.00000
REMARK 3
REMARK 3 ESTIMATED COORDINATE ERROR.
REMARK 3 ESD FROM LUZZATI PLOT (A) : 0.26
REMARK 3 ESD FROM SIGMAA (A) : 0.18
REMARK 3 LOW RESOLUTION CUTOFF (A) : 5.00
REMARK 3
REMARK 3 CROSS-VALIDATED ESTIMATED COORDINATE ERROR.
REMARK 3 ESD FROM C-V LUZZATI PLOT (A) : 0.28
REMARK 3 ESD FROM C-V SIGMAA (A) : 0.18
REMARK 3
REMARK 3 RMS DEVIATIONS FROM IDEAL VALUES.
REMARK 3 BOND LENGTHS (A) : 0.005
REMARK 3 BOND ANGLES (DEGREES) : 1.20
REMARK 3 DIHEDRAL ANGLES (DEGREES) : 22.70
REMARK 3 IMPROPER ANGLES (DEGREES) : 0.71
REMARK 3
REMARK 3 ISOTROPIC THERMAL MODEL : RESTRAINED
REMARK 3
REMARK 3 ISOTROPIC THERMAL FACTOR RESTRAINTS. RMS SIGMA
REMARK 3 MAIN-CHAIN BOND (A**2) : 0.990 ; 1.500
REMARK 3 MAIN-CHAIN ANGLE (A**2) : 1.660 ; 2.000
REMARK 3 SIDE-CHAIN BOND (A**2) : 1.450 ; 2.000
REMARK 3 SIDE-CHAIN ANGLE (A**2) : 2.260 ; 2.500
REMARK 3
REMARK 3 BULK SOLVENT MODELING.
REMARK 3 METHOD USED : FLAT MODEL
REMARK 3 KSOL : 0.36
REMARK 3 BSOL : 44.08
REMARK 3
REMARK 3 NCS MODEL : NULL

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REMARK 3
REMARK 3 NCS RESTRAINTS. RMS SIGMA/WEIGHT
REMARK 3 GROUP 1 POSITIONAL (A) : NULL ; NULL
REMARK 3 GROUP 1 B-FACTOR (A**2) : NULL ; NULL
REMARK 3
REMARK 3 PARAMETER FILE 1 : PROTEIN_REP.PARAM
REMARK 3 PARAMETER FILE 2 : PARAM.GNSOL
REMARK 3 PARAMETER FILE 3 : CIS_PEPTIDE.PARAM
REMARK 3 PARAMETER FILE 4 : RMP_MPA.PAR
REMARK 3 PARAMETER FILE 5 : ION.PARAM
REMARK 3 PARAMETER FILE 6 : NULL
REMARK 3 TOPOLOGY FILE 1 : PROTEIN.TOP
REMARK 3 TOPOLOGY FILE 2 : RMP.TOP
REMARK 3 TOPOLOGY FILE 3 : MPA.TOP
REMARK 3 TOPOLOGY FILE 4 : ION.TOP
REMARK 3 TOPOLOGY FILE 5 : TOPH.GNSOL
REMARK 3 TOPOLOGY FILE 6 : NULL
REMARK 3
REMARK 3 OTHER REFINEMENT REMARKS: NULL
REMARK 4
REMARK 4 1ME8 COMPLIES WITH FORMAT V. 2.3, 09-JULY-1998
REMARK 100
REMARK 100 THIS ENTRY HAS BEEN PROCESSED BY RCSB ON 16-AUG-2002.
REMARK 100 THE RCSB ID CODE IS RCSB016850.
REMARK 200
REMARK 200 EXPERIMENTAL DETAILS
REMARK 200 EXPERIMENT TYPE : X-RAY DIFFRACTION
REMARK 200 DATE OF DATA COLLECTION : 12-JUN-2001
REMARK 200 TEMPERATURE (KELVIN) : 100.0
REMARK 200 PH : 7.50
REMARK 200 NUMBER OF CRYSTALS USED : 1
REMARK 200
REMARK 200 SYNCHROTRON (Y/N) : Y
REMARK 200 RADIATION SOURCE : SSRL
REMARK 200 BEAMLINE : 9-1
REMARK 200 X-RAY GENERATOR MODEL : NULL
REMARK 200 MONOCHROMATIC OR LAUE (M/L) : M
REMARK 200 WAVELENGTH OR RANGE (A) : 0.97
REMARK 200 MONOCHROMATOR : NULL
REMARK 200 OPTICS : NULL
REMARK 200
REMARK 200 DETECTOR TYPE : IMAGE PLATE
REMARK 200 DETECTOR MANUFACTURER : MARRESEARCH
REMARK 200 INTENSITY-INTEGRATION SOFTWARE : DENZO
REMARK 200 DATA SCALING SOFTWARE : SCALEPACK
REMARK 200
REMARK 200 NUMBER OF UNIQUE REFLECTIONS : 50290
REMARK 200 RESOLUTION RANGE HIGH (A) : 1.900
REMARK 200 RESOLUTION RANGE LOW (A) : 50.000
REMARK 200 REJECTION CRITERIA (SIGMA(I)) : 0.000
REMARK 200
REMARK 200 OVERALL.
REMARK 200 COMPLETENESS FOR RANGE (%) : 99.9
REMARK 200 DATA REDUNDANCY : 10.000
REMARK 200 R MERGE (I) : 0.08000
REMARK 200 R SYM (I) : NULL
REMARK 200 <I/SIGMA(I)> FOR THE DATA SET : 33.8000

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REMARK 200  
 REMARK 200 IN THE HIGHEST RESOLUTION SHELL.  
 REMARK 200 HIGHEST RESOLUTION SHELL, RANGE HIGH (A) : 1.90  
 REMARK 200 HIGHEST RESOLUTION SHELL, RANGE LOW (A) : 1.93  
 REMARK 200 COMPLETENESS FOR SHELL (%) : 100.0  
 REMARK 200 DATA REDUNDANCY IN SHELL : NULL  
 REMARK 200 R MERGE FOR SHELL (I) : 0.60000  
 REMARK 200 R SYM FOR SHELL (I) : NULL  
 REMARK 200 <I/SIGMA(I)> FOR SHELL : 2.400  
 REMARK 200  
 REMARK 200 DIFFRACTION PROTOCOL: SINGLE WAVELENGTH  
 REMARK 200 METHOD USED TO DETERMINE THE STRUCTURE: FOURIER SYNTHESIS  
 REMARK 200 SOFTWARE USED: CNS  
 REMARK 200 STARTING MODEL: NULL  
 REMARK 200  
 REMARK 200 REMARK: NULL  
 REMARK 280  
 REMARK 280 CRYSTAL  
 REMARK 280 SOLVENT CONTENT, VS (%): NULL  
 REMARK 280 MATTHEWS COEFFICIENT, VM (ANGSTROMS\*\*3/DA): NULL  
 REMARK 280  
 REMARK 280 CRYSTALLIZATION CONDITIONS: SODIUM MALONATE, TRIS, 2-  
 REMARK 280 MERCAPTOETHANOL, EDTA, GLYCEROL  
 REMARK 290  
 REMARK 290 CRYSTALLOGRAPHIC SYMMETRY  
 REMARK 290 SYMMETRY OPERATORS FOR SPACE GROUP: P 4 3 2  
 REMARK 290  

REMARK 290	SYMOP	SYMMETRY
REMARK 290	NNNNMM	OPERATOR
REMARK 290	1555	X,Y,Z
REMARK 290	2555	-X,-Y,Z
REMARK 290	3555	-X,Y,-Z
REMARK 290	4555	X,-Y,-Z
REMARK 290	5555	Z,X,Y
REMARK 290	6555	Z,-X,-Y
REMARK 290	7555	-Z,-X,Y
REMARK 290	8555	-Z,X,-Y
REMARK 290	9555	Y,Z,X
REMARK 290	10555	-Y,Z,-X
REMARK 290	11555	Y,-Z,-X
REMARK 290	12555	-Y,-Z,X
REMARK 290	13555	Y,X,-Z
REMARK 290	14555	-Y,-X,-Z
REMARK 290	15555	Y,-X,Z
REMARK 290	16555	-Y,X,Z
REMARK 290	17555	X,Z,-Y
REMARK 290	18555	-X,Z,Y
REMARK 290	19555	-X,-Z,-Y
REMARK 290	20555	X,-Z,Y
REMARK 290	21555	Z,Y,-X
REMARK 290	22555	Z,-Y,X
REMARK 290	23555	-Z,Y,X
REMARK 290	24555	-Z,-Y,-X

 REMARK 290  
 REMARK 290 WHERE NNN -> OPERATOR NUMBER  
 REMARK 290 MMM -> TRANSLATION VECTOR  
 REMARK 290

REMARK 290 CRYSTALLOGRAPHIC SYMMETRY TRANSFORMATIONS  
REMARK 290 THE FOLLOWING TRANSFORMATIONS OPERATE ON THE ATOM/HETATM  
REMARK 290 RECORDS IN THIS ENTRY TO PRODUCE CRYSTALLOGRAPHICALLY  
REMARK 290 RELATED MOLECULES.

REMARK 290	SMTRY1	1	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	1	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY3	1	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	2	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	2	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY3	2	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	3	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	3	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY3	3	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	4	1.000000	0.000000	-0.000000	0.000000
REMARK 290	SMTRY2	4	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY3	4	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	5	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY2	5	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	5	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY1	6	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY2	6	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	6	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	7	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY2	7	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	7	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY1	8	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY2	8	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	8	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	9	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	9	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	9	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	10	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	10	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	10	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	11	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	11	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY3	11	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	12	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	12	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY3	12	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY1	13	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	13	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	13	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	14	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	14	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	14	0.000000	0.000000	-1.000000	0.000000
REMARK 290	SMTRY1	15	0.000000	1.000000	0.000000	0.000000
REMARK 290	SMTRY2	15	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	15	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	16	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY2	16	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY3	16	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY1	17	1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	17	0.000000	0.000000	1.000000	0.000000
REMARK 290	SMTRY3	17	0.000000	-1.000000	0.000000	0.000000
REMARK 290	SMTRY1	18	-1.000000	0.000000	0.000000	0.000000
REMARK 290	SMTRY2	18	0.000000	0.000000	1.000000	0.000000

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REMARK 290  SMTRY3  18  0.000000  1.000000  0.000000      0.00000
REMARK 290  SMTRY1  19 -1.000000  0.000000  0.000000      0.00000
REMARK 290  SMTRY2  19  0.000000  0.000000 -1.000000      0.00000
REMARK 290  SMTRY3  19  0.000000 -1.000000  0.000000      0.00000
REMARK 290  SMTRY1  20  1.000000  0.000000  0.000000      0.00000
REMARK 290  SMTRY2  20  0.000000  0.000000 -1.000000      0.00000
REMARK 290  SMTRY3  20  0.000000  1.000000  0.000000      0.00000
REMARK 290  SMTRY1  21  0.000000  0.000000  1.000000      0.00000
REMARK 290  SMTRY2  21  0.000000  1.000000  0.000000      0.00000
REMARK 290  SMTRY3  21 -1.000000  0.000000  0.000000      0.00000
REMARK 290  SMTRY1  22  0.000000  0.000000  1.000000      0.00000
REMARK 290  SMTRY2  22  0.000000 -1.000000  0.000000      0.00000
REMARK 290  SMTRY3  22  1.000000  0.000000  0.000000      0.00000
REMARK 290  SMTRY1  23  0.000000  0.000000 -1.000000      0.00000
REMARK 290  SMTRY2  23  0.000000  1.000000  0.000000      0.00000
REMARK 290  SMTRY3  23  1.000000  0.000000  0.000000      0.00000
REMARK 290  SMTRY1  24  0.000000  0.000000 -1.000000      0.00000
REMARK 290  SMTRY2  24  0.000000 -1.000000  0.000000      0.00000
REMARK 290  SMTRY3  24 -1.000000  0.000000  0.000000      0.00000
REMARK 290
REMARK 290 REMARK: NULL
REMARK 300
REMARK 300 BIOMOLECULE: 1
REMARK 300 THIS ENTRY CONTAINS THE CRYSTALLOGRAPHIC ASYMMETRIC UNIT
REMARK 300 WHICH CONSISTS OF 1 CHAIN(S). SEE REMARK 350 FOR
REMARK 300 INFORMATION ON GENERATING THE BIOLOGICAL MOLECULE(S).
REMARK 350
REMARK 350 GENERATING THE BIOMOLECULE
REMARK 350 COORDINATES FOR A COMPLETE MULTIMER REPRESENTING THE KNOWN
REMARK 350 BIOLOGICALLY SIGNIFICANT OLIGOMERIZATION STATE OF THE
REMARK 350 MOLECULE CAN BE GENERATED BY APPLYING BIOMT TRANSFORMATIONS
REMARK 350 GIVEN BELOW. BOTH NON-CRYSTALLOGRAPHIC AND
REMARK 350 CRYSTALLOGRAPHIC OPERATIONS ARE GIVEN.
REMARK 350
REMARK 350 BIOMOLECULE: 1
REMARK 350 APPLY THE FOLLOWING TO CHAINS: A
REMARK 350  BIOMT1   1  1.000000  0.000000  0.000000      0.00000
REMARK 350  BIOMT2   1  0.000000  1.000000  0.000000      0.00000
REMARK 350  BIOMT3   1  0.000000  0.000000  1.000000      0.00000
REMARK 350  BIOMT1   2 -1.000000  0.000000  0.000000     154.74500
REMARK 350  BIOMT2   2  0.000000 -1.000000  0.000000     154.74500
REMARK 350  BIOMT3   2  0.000000  0.000000  1.000000      0.00000
REMARK 350  BIOMT1   3  0.000000  1.000000  0.000000      0.00000
REMARK 350  BIOMT2   3 -1.000000  0.000000  0.000000     154.74500
REMARK 350  BIOMT3   3  0.000000  0.000000  1.000000      0.00000
REMARK 350  BIOMT1   4  0.000000 -1.000000  0.000000     154.74500
REMARK 350  BIOMT2   4  1.000000  0.000000  0.000000      0.00000
REMARK 350  BIOMT3   4  0.000000  0.000000  1.000000      0.00000
REMARK 465
REMARK 465 MISSING RESIDUES
REMARK 465 THE FOLLOWING RESIDUES WERE NOT LOCATED IN THE
REMARK 465 EXPERIMENT. (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 465 IDENTIFIER; SSSEQ=SEQUENCE NUMBER; I=INSERTION CODE.)
REMARK 465
REMARK 465      M RES C SSSEQI
REMARK 465      MET A      1
REMARK 465      GLY A     102

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REMARK 465	PHE A	103
REMARK 465	VAL A	104
REMARK 465	VAL A	105
REMARK 465	SER A	106
REMARK 465	ASP A	107
REMARK 465	SER A	108
REMARK 465	ASN A	109
REMARK 465	VAL A	110
REMARK 465	LYS A	111
REMARK 465	PRO A	112
REMARK 465	ASP A	113
REMARK 465	GLN A	114
REMARK 465	THR A	115
REMARK 465	PHE A	116
REMARK 465	ALA A	117
REMARK 465	ASP A	118
REMARK 465	VAL A	119
REMARK 465	LEU A	120
REMARK 465	ALA A	121
REMARK 465	ILE A	122
REMARK 465	SER A	123
REMARK 465	GLN A	124
REMARK 465	ARG A	125
REMARK 465	THR A	126
REMARK 465	THR A	127
REMARK 465	HIS A	128
REMARK 465	ASN A	129
REMARK 465	THR A	130
REMARK 465	VAL A	131
REMARK 465	ALA A	132
REMARK 465	VAL A	133
REMARK 465	THR A	134
REMARK 465	ASP A	135
REMARK 465	ASP A	136
REMARK 465	GLY A	137
REMARK 465	THR A	138
REMARK 465	PRO A	139
REMARK 465	HIS A	140
REMARK 465	GLY A	141
REMARK 465	VAL A	142
REMARK 465	LEU A	143
REMARK 465	LEU A	144
REMARK 465	GLY A	145
REMARK 465	LEU A	146
REMARK 465	VAL A	147
REMARK 465	THR A	148
REMARK 465	GLN A	149
REMARK 465	ARG A	150
REMARK 465	ASP A	151
REMARK 465	TYR A	152
REMARK 465	PRO A	153
REMARK 465	ILE A	154
REMARK 465	ASP A	155
REMARK 465	LEU A	156
REMARK 465	THR A	157
REMARK 465	GLN A	158
REMARK 465	THR A	159



REMARK 465	GLU A	160
REMARK 465	THR A	161
REMARK 465	LYS A	162
REMARK 465	VAL A	163
REMARK 465	SER A	164
REMARK 465	ASP A	165
REMARK 465	MET A	166
REMARK 465	MET A	167
REMARK 465	THR A	168
REMARK 465	PRO A	169
REMARK 465	PHE A	170
REMARK 465	SER A	171
REMARK 465	LYS A	172
REMARK 465	LEU A	173
REMARK 465	VAL A	174
REMARK 465	THR A	175
REMARK 465	ALA A	176
REMARK 465	HIS A	177
REMARK 465	GLN A	178
REMARK 465	ASP A	179
REMARK 465	THR A	180
REMARK 465	LYS A	181
REMARK 465	LEU A	182
REMARK 465	SER A	183
REMARK 465	GLU A	184
REMARK 465	ALA A	185
REMARK 465	ASN A	186
REMARK 465	LYS A	187
REMARK 465	ILE A	188
REMARK 465	ILE A	189
REMARK 465	TRP A	190
REMARK 465	GLU A	191
REMARK 465	LYS A	192
REMARK 465	LYS A	193
REMARK 465	LEU A	194
REMARK 465	ASN A	195
REMARK 465	ALA A	196
REMARK 465	LEU A	197
REMARK 465	PRO A	198
REMARK 465	ILE A	199
REMARK 465	ILE A	200
REMARK 465	ASP A	201
REMARK 465	ASP A	202
REMARK 465	ASP A	203
REMARK 465	GLN A	204
REMARK 465	HIS A	205
REMARK 465	LEU A	206
REMARK 465	ARG A	207
REMARK 465	TYR A	208
REMARK 465	ILE A	209
REMARK 465	VAL A	210
REMARK 465	PHE A	211
REMARK 465	ARG A	212
REMARK 465	LYS A	213
REMARK 465	ASP A	214
REMARK 465	TYR A	215
REMARK 465	ASP A	216

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REMARK 465      ARG A      217
REMARK 465      SER A      218
REMARK 465      GLN A      219
REMARK 465      VAL A      220
REMARK 465      CYS A      221
REMARK 465      GLN A      417
REMARK 465      ARG A      418
REMARK 465      TYR A      419
REMARK 465      ASP A      420
REMARK 465      LEU A      421
REMARK 465      GLY A      422
REMARK 465      GLY A      423
REMARK 465      LYS A      424
REMARK 465      GLN A      425
REMARK 465      LYS A      426
REMARK 465      LEU A      427
REMARK 465      SER A      428
REMARK 465      PHE A      429
REMARK 465      GLU A      430
REMARK 465      VAL A      493
REMARK 465      LYS A      494
REMARK 465      ASP A      495
REMARK 465      ARG A      496
REMARK 465      ILE A      497
REMARK 465      ASN A      498
REMARK 465      ASP A      499
REMARK 465      TYR A      500
REMARK 465      HIS A      501
REMARK 465      PRO A      502
REMARK 465      LYS A      503
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND ANGLES
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,3(1X,A4,2X),12X,F5.1)
REMARK 500
REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991
REMARK 500
REMARK 500  M RES CSSEQI ATM1  ATM2  ATM3
REMARK 500  GLY A  20   N   -   CA   -   C   ANGL. DEV. = -7.5 DEGREES
REMARK 500  ILE A  27   N   -   CA   -   C   ANGL. DEV. = -9.2 DEGREES
REMARK 500  PRO A  53   N   -   CA   -   C   ANGL. DEV. =  7.4 DEGREES
REMARK 500  SER A  63   N   -   CA   -   C   ANGL. DEV. =  8.5 DEGREES
REMARK 500  SER A 357   N   -   CA   -   C   ANGL. DEV. = -7.3 DEGREES
REMARK 500  LYS A 472   N   -   CA   -   C   ANGL. DEV. =  8.2 DEGREES
REMARK 500  LYS A 474   N   -   CA   -   C   ANGL. DEV. = -8.8 DEGREES
REMARK 500  LEU A 477   N   -   CA   -   C   ANGL. DEV. = -8.6 DEGREES
REMARK 900
REMARK 900 RELATED ENTRIES
REMARK 900 RELATED ID: 1AK5      RELATED DB: PDB
REMARK 900 INOSINE MONOPHOSPHATE DEHYDROGENASE (IMPDH) FROM

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REMARK 900 TRITRICHOMONAS FOETUS  
 REMARK 900 RELATED ID: 1ME7 RELATED DB: PDB  
 REMARK 900 1ME7 CONTAINS THE SAME PROTEIN WITH RRP AND MOA BOUND  
 REMARK 900 RELATED ID: 1ME9 RELATED DB: PDB  
 REMARK 900 1ME9 CONTAINS THE SAME PROTEIN WITH IMP BOUND  
 REMARK 900 RELATED ID: 1MEH RELATED DB: PDB  
 REMARK 900 1MEH CONTAINS THE SAME PROTEIN WITH IMP AND MOA BOUND  
 REMARK 900 RELATED ID: 1MEI RELATED DB: PDB  
 REMARK 900 1MEI CONTAINS THE SAME PROTEIN WITH XMP AND MYCOPHENOLIC  
 REMARK 900 ACID BOUND  
 REMARK 900 RELATED ID: 1MEW RELATED DB: PDB  
 REMARK 900 1MEW CONTAINS THE SAME PROTEIN WITH XMP AND NAD BOUND  
 DBREF 1ME8 A 1 503 SWS P50097 IMDH\_TRIFO 1 503  
 SEQADV 1ME8 CSO A 319 SWS P50097 CYS 319 MODIFIED RESIDUE  
 SEQRES 1 A 503 MET ALA LYS TYR TYR ASN GLU PRO CYS HIS THR PHE ASN  
 SEQRES 2 A 503 GLU TYR LEU LEU ILE PRO GLY LEU SER THR VAL ASP CYS  
 SEQRES 3 A 503 ILE PRO SER ASN VAL ASN LEU SER THR PRO LEU VAL LYS  
 SEQRES 4 A 503 PHE GLN LYS GLY GLN GLN SER GLU ILE ASN LEU LYS ILE  
 SEQRES 5 A 503 PRO LEU VAL SER ALA ILE MET GLN SER VAL SER GLY GLU  
 SEQRES 6 A 503 LYS MET ALA ILE ALA LEU ALA ARG GLU GLY GLY ILE SER  
 SEQRES 7 A 503 PHE ILE PHE GLY SER GLN SER ILE GLU SER GLN ALA ALA  
 SEQRES 8 A 503 MET VAL HIS ALA VAL LYS ASN PHE LYS ALA GLY PHE VAL  
 SEQRES 9 A 503 VAL SER ASP SER ASN VAL LYS PRO ASP GLN THR PHE ALA  
 SEQRES 10 A 503 ASP VAL LEU ALA ILE SER GLN ARG THR THR HIS ASN THR  
 SEQRES 11 A 503 VAL ALA VAL THR ASP ASP GLY THR PRO HIS GLY VAL LEU  
 SEQRES 12 A 503 LEU GLY LEU VAL THR GLN ARG ASP TYR PRO ILE ASP LEU  
 SEQRES 13 A 503 THR GLN THR GLU THR LYS VAL SER ASP MET MET THR PRO  
 SEQRES 14 A 503 PHE SER LYS LEU VAL THR ALA HIS GLN ASP THR LYS LEU  
 SEQRES 15 A 503 SER GLU ALA ASN LYS ILE ILE TRP GLU LYS LYS LEU ASN  
 SEQRES 16 A 503 ALA LEU PRO ILE ILE ASP ASP ASP GLN HIS LEU ARG TYR  
 SEQRES 17 A 503 ILE VAL PHE ARG LYS ASP TYR ASP ARG SER GLN VAL CYS  
 SEQRES 18 A 503 HIS ASN GLU LEU VAL ASP SER GLN LYS ARG TYR LEU VAL  
 SEQRES 19 A 503 GLY ALA GLY ILE ASN THR ARG ASP PHE ARG GLU ARG VAL  
 SEQRES 20 A 503 PRO ALA LEU VAL GLU ALA GLY ALA ASP VAL LEU CYS ILE  
 SEQRES 21 A 503 ASP SER SER ASP GLY PHE SER GLU TRP GLN LYS ILE THR  
 SEQRES 22 A 503 ILE GLY TRP ILE ARG GLU LYS TYR GLY ASP LYS VAL LYS  
 SEQRES 23 A 503 VAL GLY ALA GLY ASN ILE VAL ASP GLY GLU GLY PHE ARG  
 SEQRES 24 A 503 TYR LEU ALA ASP ALA GLY ALA ASP PHE ILE LYS ILE GLY  
 SEQRES 25 A 503 ILE GLY GLY GLY SER ILE CSO ILE THR ARG GLU GLN LYS  
 SEQRES 26 A 503 GLY ILE GLY ARG GLY GLN ALA THR ALA VAL ILE ASP VAL  
 SEQRES 27 A 503 VAL ALA GLU ARG ASN LYS TYR PHE GLU GLU THR GLY ILE  
 SEQRES 28 A 503 TYR ILE PRO VAL CYS SER ASP GLY GLY ILE VAL TYR ASP  
 SEQRES 29 A 503 TYR HIS MET THR LEU ALA LEU ALA MET GLY ALA ASP PHE  
 SEQRES 30 A 503 ILE MET LEU GLY ARG TYR PHE ALA ARG PHE GLU GLU SER  
 SEQRES 31 A 503 PRO THR ARG LYS VAL THR ILE ASN GLY SER VAL MET LYS  
 SEQRES 32 A 503 GLU TYR TRP GLY GLU GLY SER SER ARG ALA ARG ASN TRP  
 SEQRES 33 A 503 GLN ARG TYR ASP LEU GLY GLY LYS GLN LYS LEU SER PHE  
 SEQRES 34 A 503 GLU GLU GLY VAL ASP SER TYR VAL PRO TYR ALA GLY LYS  
 SEQRES 35 A 503 LEU LYS ASP ASN VAL GLU ALA SER LEU ASN LYS VAL LYS  
 SEQRES 36 A 503 SER THR MET CYS ASN CYS GLY ALA LEU THR ILE PRO GLN  
 SEQRES 37 A 503 LEU GLN SER LYS ALA LYS ILE THR LEU VAL SER SER VAL  
 SEQRES 38 A 503 SER ILE VAL GLU GLY GLY ALA HIS ASP VAL ILE VAL LYS  
 SEQRES 39 A 503 ASP ARG ILE ASN ASP TYR HIS PRO LYS  
 MODRES 1ME8 CSO A 319 CYS S-HYDROXYCYSTEINE  
 HET CSO A 319 7  
 HET K 900 1  
 HET NA 901 1

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HET	RVP	602	21															
HETNAM	CSO S-HYDROXYCYSTEINE																	
HETNAM	K POTASSIUM ION																	
HETNAM	NA SODIUM ION																	
HETNAM	RVP RIBAVIRIN MONOPHOSPHATE																	
FORMUL	1	CSO	C3	H7	N1	O3	S1											
FORMUL	2	K	K1	1+														
FORMUL	3	NA	NA1	1+														
FORMUL	4	RVP	C8	H13	N4	O8	P1											
FORMUL	5	HOH	*201(H2 O1)															
HELIX	1	1	THR	A	11	ASN	A	13	5									
3																		
HELIX	2	2	ILE	A	27	VAL	A	31	5									
5																		
HELIX	3	3	GLY	A	64	GLU	A	74	1									
11																		
HELIX	4	4	SER	A	85	ASN	A	98	1									
14																		
HELIX	5	5	ASP	A	242	GLY	A	254	1									
13																		
HELIX	6	6	SER	A	267	GLY	A	282	1									
16																		
HELIX	7	7	ASP	A	283	VAL	A	285	5									
3																		
HELIX	8	8	ASP	A	294	GLY	A	305	1									
12																		
HELIX	9	9	GLY	A	330	GLY	A	350	1									
21																		
HELIX	10	10	TYR	A	363	MET	A	373	1									
11																		
HELIX	11	11	GLY	A	381	ARG	A	386	1									
6																		
HELIX	12	12	SER	A	410	ASN	A	415	1									
6																		
HELIX	13	13	LYS	A	442	CYS	A	461	1									
20																		
HELIX	14	14	THR	A	465	ALA	A	473	1									
9																		
SHEET	1	A	2	TYR	A	15	LEU	A	17	0								
SHEET	2	A	2	ILE	A	475	LEU	A	477	-1	O	THR	A	476	N	LEU	A	16
SHEET	1	B	2	THR	A	35	PRO	A	36	0								
SHEET	2	B	2	ASN	A	49	LEU	A	50	-1	O	LEU	A	50	N	THR	A	35
SHEET	1	C	2	PHE	A	40	GLN	A	41	0								
SHEET	2	C	2	ILE	A	351	TYR	A	352	-1	O	TYR	A	352	N	PHE	A	40
SHEET	1	D	9	LEU	A	54	SER	A	56	0								
SHEET	2	D	9	ILE	A	77	ILE	A	80	1	O	ILE	A	77	N	SER	A	56
SHEET	3	D	9	GLY	A	235	ILE	A	238	1	O	GLY	A	237	N	ILE	A	80
SHEET	4	D	9	VAL	A	257	ILE	A	260	1	O	CYS	A	259	N	ILE	A	238
SHEET	5	D	9	VAL	A	287	ILE	A	292	1	O	GLY	A	288	N	LEU	A	258
SHEET	6	D	9	PHE	A	308	ILE	A	311	1	O	LYS	A	310	N	ALA	A	289
SHEET	7	D	9	VAL	A	355	ASP	A	358	1	O	CYS	A	356	N	ILE	A	311
SHEET	8	D	9	PHE	A	377	LEU	A	380	1	O	MET	A	379	N	SER	A	357
SHEET	9	D	9	LEU	A	54	SER	A	56	1	N	VAL	A	55	O	ILE	A	378
SHEET	1	E	3	LYS	A	394	ILE	A	397	0								
SHEET	2	E	3	SER	A	400	TRP	A	406	-1	O	MET	A	402	N	VAL	A	395
SHEET	3	E	3	ASP	A	434	PRO	A	438	-1	O	SER	A	435	N	TYR	A	405
SSBOND	1	CYS	A	26	CYS	A	459											

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CISPEP	1	GLY A	290	ASN A	291	0	0.82
CRYST1	154.745	154.745	154.745	90.00	90.00	90.00	P 4 3 2
ORIGX1	1.000000	0.000000	0.000000			0.00000	
ORIGX2	0.000000	1.000000	0.000000			0.00000	
ORIGX3	0.000000	0.000000	1.000000			0.00000	
SCALE1	0.006462	0.000000	0.000000			0.00000	
SCALE2	0.000000	0.006462	0.000000			0.00000	
SCALE3	0.000000	0.000000	0.006462			0.00000	
ATOM N	1	N	ALA A	2	55.144	74.892	36.640 1.00 29.93
ATOM C	2	CA	ALA A	2	55.885	73.830	35.910 1.00 29.54
ATOM C	3	C	ALA A	2	57.177	73.489	36.647 1.00 30.30
ATOM O	4	O	ALA A	2	57.618	74.234	37.525 1.00 29.88
ATOM C	5	CB	ALA A	2	56.201	74.301	34.491 1.00 29.72
ATOM N	6	N	LYS A	3	57.771	72.357	36.289 1.00 29.86
ATOM C	7	CA	LYS A	3	59.015	71.919	36.904 1.00 30.69
ATOM C	8	C	LYS A	3	60.155	72.132	35.922 1.00 29.48
ATOM O	9	O	LYS A	3	60.040	71.777	34.753 1.00 28.89
ATOM C	10	CB	LYS A	3	58.943	70.434	37.275 1.00 33.07
ATOM C	11	CG	LYS A	3	60.304	69.840	37.628 1.00 37.75
ATOM C	12	CD	LYS A	3	60.240	68.344	37.872 1.00 41.04
ATOM C	13	CE	LYS A	3	61.628	67.728	37.773 1.00 42.33
ATOM N	14	NZ	LYS A	3	62.601	68.424	38.656 1.00 43.20
ATOM N	15	N	TYR A	4	61.252	72.704	36.407 1.00 28.93
ATOM C	16	CA	TYR A	4	62.425	72.961	35.581 1.00 28.85
ATOM C	17	C	TYR A	4	63.620	72.167	36.109 1.00 29.60
ATOM O	18	O	TYR A	4	63.545	71.551	37.172 1.00 28.77
ATOM C	19	CB	TYR A	4	62.732	74.463	35.571 1.00 28.38
ATOM C	20	CG	TYR A	4	61.634	75.274	34.917 1.00 27.99
ATOM C	21	CD1	TYR A	4	61.519	75.336	33.527 1.00 27.06
ATOM C	22	CD2	TYR A	4	60.684	75.946	35.686 1.00 28.17
ATOM C	23	CE1	TYR A	4	60.479	76.050	32.919 1.00 27.85
ATOM C	24	CE2	TYR A	4	59.643	76.662	35.087 1.00 27.52

TABLE 7

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ATOM C	25	CZ	TYR A	4	59.547	76.708	33.707	1.00	27.20
ATOM O	26	OH	TYR A	4	58.512	77.400	33.115	1.00	27.38
ATOM N	27	N	TYR A	5	64.714	72.173	35.359	1.00	30.38
ATOM C	28	CA	TYR A	5	65.909	71.436	35.756	1.00	31.23
ATOM C	29	C	TYR A	5	67.109	72.364	35.895	1.00	32.36
ATOM O	30	O	TYR A	5	67.143	73.440	35.300	1.00	31.65
ATOM C	31	CB	TYR A	5	66.204	70.330	34.739	1.00	31.26
ATOM C	32	CG	TYR A	5	65.063	69.349	34.584	1.00	31.28
ATOM C	33	CD1	TYR A	5	63.906	69.702	33.891	1.00	30.79
ATOM C	34	CD2	TYR A	5	65.116	68.085	35.179	1.00	31.65
ATOM C	35	CE1	TYR A	5	62.824	68.826	33.794	1.00	30.64
ATOM C	36	CE2	TYR A	5	64.039	67.199	35.088	1.00	30.49
ATOM C	37	CZ	TYR A	5	62.897	67.579	34.395	1.00	31.03
ATOM O	38	OH	TYR A	5	61.817	66.725	34.313	1.00	29.28
ATOM N	39	N	ASN A	6	68.090	71.942	36.687	1.00	33.08
ATOM C	40	CA	ASN A	6	69.285	72.744	36.925	1.00	34.41
ATOM C	41	C	ASN A	6	70.250	72.779	35.744	1.00	34.13
ATOM O	42	O	ASN A	6	70.971	73.758	35.556	1.00	34.71
ATOM C	43	CB	ASN A	6	70.009	72.226	38.171	1.00	37.70
ATOM C	44	CG	ASN A	6	69.207	72.440	39.444	1.00	39.54
ATOM O	45	OD1	ASN A	6	69.407	71.747	40.441	1.00	42.37
ATOM N	46	ND2	ASN A	6	68.303	73.414	39.420	1.00	42.40
ATOM N	47	N	GLU A	7	70.263	71.716	34.946	1.00	32.89
ATOM C	48	CA	GLU A	7	71.158	71.648	33.795	1.00	32.05
ATOM C	49	C	GLU A	7	70.419	71.313	32.505	1.00	30.13
ATOM O	50	O	GLU A	7	69.369	70.675	32.528	1.00	30.64
ATOM C	51	CB	GLU A	7	72.224	70.567	34.012	1.00	34.45
ATOM C	52	CG	GLU A	7	73.156	70.770	35.200	1.00	38.35

TABLE 7

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ATOM C	53	CD	GLU A	7	74.057	71.981	35.049	1.00	40.20
ATOM O	54	OE1	GLU A	7	74.484	72.278	33.912	1.00	41.55
ATOM O	55	OE2	GLU A	7	74.351	72.631	36.075	1.00	42.84
ATOM N	56	N	PRO A	8	70.962	71.745	31.359	1.00	28.48
ATOM C	57	CA	PRO A	8	70.318	71.446	30.079	1.00	27.48
ATOM C	58	C	PRO A	8	70.655	69.995	29.755	1.00	26.53
ATOM O	59	O	PRO A	8	71.595	69.448	30.326	1.00	24.18
ATOM C	60	CB	PRO A	8	70.992	72.423	29.121	1.00	27.72
ATOM C	61	CG	PRO A	8	72.380	72.532	29.688	1.00	28.52
ATOM C	62	CD	PRO A	8	72.113	72.649	31.172	1.00	28.72
ATOM N	63	N	CYS A	9	69.894	69.359	28.869	1.00	26.18
ATOM C	64	CA	CYS A	9	70.202	67.979	28.518	1.00	25.70
ATOM C	65	C	CYS A	9	71.285	67.935	27.435	1.00	25.71
ATOM O	66	O	CYS A	9	71.474	68.905	26.685	1.00	24.82
ATOM C	67	CB	CYS A	9	68.936	67.239	28.065	1.00	27.09
ATOM S	68	SG	CYS A	9	68.004	68.021	26.742	1.00	29.97
ATOM N	69	N	HIS A	10	72.003	66.816	27.370	1.00	24.60
ATOM C	70	CA	HIS A	10	73.095	66.632	26.414	1.00	24.16
ATOM C	71	C	HIS A	10	72.932	65.349	25.612	1.00	24.05
ATOM O	72	O	HIS A	10	72.269	64.415	26.058	1.00	22.94
ATOM C	73	CB	HIS A	10	74.433	66.580	27.160	1.00	24.38
ATOM C	74	CG	HIS A	10	74.693	67.779	28.015	1.00	25.68
ATOM N	75	ND1	HIS A	10	75.121	68.981	27.498	1.00	26.11
ATOM C	76	CD2	HIS A	10	74.544	67.973	29.347	1.00	26.09
ATOM C	77	CE1	HIS A	10	75.225	69.866	28.474	1.00	26.14
ATOM N	78	NE2	HIS A	10	74.879	69.278	29.606	1.00	27.18
ATOM N	79	N	THR A	11	73.549	65.311	24.432	1.00	25.34
ATOM C	80	CA	THR A	11	73.494	64.139	23.550	1.00	26.59

TABLE 7

ATOM C	81	C	THR A	11	74.857	63.439	23.539	1.00	25.78
ATOM O	82	O	THR A	11	75.843	63.990	24.021	1.00	25.20
ATOM C	83	CB	THR A	11	73.175	64.536	22.095	1.00	28.50
ATOM O	84	OG1	THR A	11	74.190	65.429	21.620	1.00	31.80
ATOM C	85	CG2	THR A	11	71.824	65.223	22.000	1.00	31.57
ATOM N	86	N	PHE A	12	74.909	62.240	22.964	1.00	25.57
ATOM C	87	CA	PHE A	12	76.154	61.469	22.890	1.00	26.57
ATOM C	88	C	PHE A	12	77.334	62.201	22.244	1.00	26.75
ATOM O	89	O	PHE A	12	78.477	62.029	22.666	1.00	26.43
ATOM C	90	CB	PHE A	12	75.923	60.150	22.139	1.00	26.43
ATOM C	91	CG	PHE A	12	75.034	59.180	22.869	1.00	27.74
ATOM C	92	CD1	PHE A	12	75.212	58.940	24.226	1.00	28.25
ATOM C	93	CD2	PHE A	12	74.034	58.490	22.191	1.00	28.95
ATOM C	94	CE1	PHE A	12	74.405	58.024	24.905	1.00	29.61
ATOM C	95	CE2	PHE A	12	73.223	57.572	22.858	1.00	29.31
ATOM C	96	CZ	PHE A	12	73.408	57.339	24.215	1.00	29.14
ATOM N	97	N	ASN A	13	77.071	63.003	21.216	1.00	27.42
ATOM C	98	CA	ASN A	13	78.149	63.726	20.544	1.00	28.91
ATOM C	99	C	ASN A	13	78.892	64.718	21.437	1.00	27.96
ATOM O	100	O	ASN A	13	79.972	65.193	21.076	1.00	28.99
ATOM C	101	CB	ASN A	13	77.621	64.471	19.314	1.00	31.81
ATOM C	102	CG	ASN A	13	77.584	63.600	18.079	1.00	34.70
ATOM O	103	OD1	ASN A	13	78.485	62.787	17.852	1.00	36.51
ATOM N	104	ND2	ASN A	13	76.554	63.775	17.261	1.00	37.26
ATOM N	105	N	GLU A	14	78.323	65.027	22.596	1.00	26.74
ATOM C	106	CA	GLU A	14	78.948	65.975	23.517	1.00	26.62
ATOM C	107	C	GLU A	14	79.867	65.316	24.541	1.00	26.27
ATOM O	108	O	GLU A	14	80.414	65.992	25.408	1.00	25.62



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ATOM C	109	CB	GLU A	14	77.873	66.763	24.263	1.00	26.66
ATOM C	110	CG	GLU A	14	76.939	67.529	23.347	1.00	28.65
ATOM C	111	CD	GLU A	14	75.890	68.293	24.114	1.00	29.22
ATOM O	112	OE1	GLU A	14	76.260	69.212	24.878	1.00	31.67
ATOM O	113	OE2	GLU A	14	74.696	67.973	23.957	1.00	29.46
ATOM N	114	N	TYR A	15	80.045	64.003	24.439	1.00	25.33
ATOM C	115	CA	TYR A	15	80.886	63.289	25.391	1.00	25.77
ATOM C	116	C	TYR A	15	82.069	62.544	24.788	1.00	25.99
ATOM O	117	O	TYR A	15	82.059	62.152	23.619	1.00	26.38
ATOM C	118	CB	TYR A	15	80.041	62.279	26.168	1.00	26.71
ATOM C	119	CG	TYR A	15	79.025	62.889	27.099	1.00	28.01
ATOM C	120	CD1	TYR A	15	79.377	63.262	28.397	1.00	28.23
ATOM C	121	CD2	TYR A	15	77.711	63.100	26.683	1.00	29.05
ATOM C	122	CE1	TYR A	15	78.442	63.828	29.260	1.00	30.46
ATOM C	123	CE2	TYR A	15	76.771	63.668	27.537	1.00	30.27
ATOM C	124	CZ	TYR A	15	77.144	64.028	28.820	1.00	30.91
ATOM O	125	OH	TYR A	15	76.219	64.604	29.659	1.00	34.07
ATOM N	126	N	LEU A	16	83.089	62.350	25.616	1.00	26.06
ATOM C	127	CA	LEU A	16	84.273	61.593	25.233	1.00	25.76
ATOM C	128	C	LEU A	16	84.672	60.785	26.457	1.00	24.62
ATOM O	129	O	LEU A	16	84.331	61.143	27.589	1.00	23.13
ATOM C	130	CB	LEU A	16	85.427	62.518	24.820	1.00	28.13
ATOM C	131	CG	LEU A	16	85.291	63.282	23.495	1.00	29.82
ATOM C	132	CD1	LEU A	16	86.523	64.136	23.285	1.00	30.80
ATOM C	133	CD2	LEU A	16	85.123	62.313	22.332	1.00	30.29
ATOM N	134	N	LEU A	17	85.374	59.683	26.230	1.00	24.43
ATOM C	135	CA	LEU A	17	85.841	58.835	27.321	1.00	25.14
ATOM C	136	C	LEU A	17	87.311	59.147	27.608	1.00	25.20

TABLE 7

ATOM O	137	O	LEU A	17	88.097	59.336	26.682	1.00	25.84
ATOM C	138	CB	LEU A	17	85.706	57.359	26.933	1.00	25.29
ATOM C	139	CG	LEU A	17	84.288	56.777	26.938	1.00	25.32
ATOM C	140	CD1	LEU A	17	84.233	55.534	26.077	1.00	26.22
ATOM C	141	CD2	LEU A	17	83.876	56.466	28.366	1.00	25.45
ATOM N	142	N	ILE A	18	87.667	59.210	28.889	1.00	25.46
ATOM C	143	CA	ILE A	18	89.047	59.460	29.294	1.00	25.22
ATOM C	144	C	ILE A	18	89.608	58.101	29.718	1.00	25.38
ATOM O	145	O	ILE A	18	89.062	57.446	30.598	1.00	25.99
ATOM C	146	CB	ILE A	18	89.112	60.460	30.467	1.00	25.47
ATOM C	147	CG1	ILE A	18	88.653	61.843	29.979	1.00	25.88
ATOM C	148	CG2	ILE A	18	90.538	60.531	31.027	1.00	24.00
ATOM C	149	CD1	ILE A	18	88.620	62.909	31.057	1.00	28.70
ATOM N	150	N	PRO A	19	90.701	57.657	29.080	1.00	26.62
ATOM C	151	CA	PRO A	19	91.306	56.360	29.408	1.00	26.83
ATOM C	152	C	PRO A	19	91.605	56.116	30.889	1.00	26.38
ATOM O	153	O	PRO A	19	91.853	57.048	31.656	1.00	26.07
ATOM C	154	CB	PRO A	19	92.584	56.350	28.564	1.00	27.54
ATOM C	155	CG	PRO A	19	92.204	57.182	27.371	1.00	28.01
ATOM C	156	CD	PRO A	19	91.463	58.336	28.018	1.00	27.10
ATOM N	157	N	GLY A	20	91.566	54.845	31.271	1.00	25.38
ATOM C	158	CA	GLY A	20	91.877	54.453	32.632	1.00	26.31
ATOM C	159	C	GLY A	20	93.077	53.528	32.511	1.00	26.29
ATOM O	160	O	GLY A	20	93.662	53.423	31.437	1.00	23.85
ATOM N	161	N	LEU A	21	93.451	52.846	33.585	1.00	26.59
ATOM C	162	CA	LEU A	21	94.601	51.948	33.506	1.00	27.89
ATOM C	163	C	LEU A	21	94.291	50.701	32.690	1.00	28.10
ATOM O	164	O	LEU A	21	93.361	49.959	33.002	1.00	28.93

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ATOM C	165	CB	LEU A	21	95.064	51.536	34.910	1.00	27.80
ATOM C	166	CG	LEU A	21	96.225	50.531	34.941	1.00	28.27
ATOM C	167	CD1	LEU A	21	97.431	51.084	34.182	1.00	27.34
ATOM C	168	CD2	LEU A	21	96.583	50.230	36.390	1.00	29.80
ATOM N	169	N	SER A	22	95.068	50.483	31.634	1.00	29.02
ATOM C	170	CA	SER A	22	94.900	49.310	30.788	1.00	31.01
ATOM C	171	C	SER A	22	95.917	48.270	31.238	1.00	32.77
ATOM O	172	O	SER A	22	97.118	48.530	31.234	1.00	31.01
ATOM C	173	CB	SER A	22	95.149	49.663	29.321	1.00	31.45
ATOM O	174	OG	SER A	22	94.206	50.608	28.855	1.00	30.59
ATOM N	175	N	THR A	23	95.435	47.096	31.632	1.00	34.58
ATOM C	176	CA	THR A	23	96.322	46.033	32.092	1.00	36.68
ATOM C	177	C	THR A	23	96.716	45.114	30.944	1.00	37.08
ATOM O	178	O	THR A	23	96.105	45.144	29.875	1.00	37.57
ATOM C	179	CB	THR A	23	95.658	45.207	33.202	1.00	37.62
ATOM O	180	OG1	THR A	23	94.335	44.851	32.797	1.00	40.83
ATOM C	181	CG2	THR A	23	95.581	46.011	34.492	1.00	39.51
ATOM N	182	N	VAL A	24	97.742	44.298	31.163	1.00	37.49
ATOM C	183	CA	VAL A	24	98.217	43.390	30.128	1.00	38.46
ATOM C	184	C	VAL A	24	97.187	42.348	29.697	1.00	39.49
ATOM O	185	O	VAL A	24	97.256	41.832	28.583	1.00	39.42
ATOM C	186	CB	VAL A	24	99.508	42.660	30.575	1.00	38.44
ATOM C	187	CG1	VAL A	24	100.651	43.662	30.713	1.00	37.27
ATOM C	188	CG2	VAL A	24	99.272	41.940	31.894	1.00	38.19
ATOM N	189	N	ASP A	25	96.224	42.045	30.562	1.00	41.42
ATOM C	190	CA	ASP A	25	95.219	41.047	30.210	1.00	44.00
ATOM C	191	C	ASP A	25	94.070	41.590	29.362	1.00	44.29
ATOM O	192	O	ASP A	25	93.220	40.826	28.908	1.00	44.12

ATOM C	193	CB	ASP A	25	94.653	40.380	31.473	1.00	46.46
ATOM C	194	CG	ASP A	25	93.826	41.329	32.327	1.00	49.04
ATOM O	195	OD1	ASP A	25	93.177	40.852	33.280	1.00	51.13
ATOM O	196	OD2	ASP A	25	93.819	42.545	32.058	1.00	51.46
ATOM N	197	N	CYS A	26	94.032	42.898	29.132	1.00	44.45
ATOM C	198	CA	CYS A	26	92.937	43.434	28.333	1.00	44.38
ATOM C	199	C	CYS A	26	93.245	43.623	26.866	1.00	44.52
ATOM O	200	O	CYS A	26	93.840	44.623	26.465	1.00	44.45
ATOM C	201	CB	CYS A	26	92.432	44.767	28.879	1.00	43.39
ATOM S	202	SG	CYS A	26	90.722	45.164	28.351	1.00	43.27
ATOM N	203	N	ILE A	27	92.835	42.646	26.071	1.00	44.85
ATOM C	204	CA	ILE A	27	92.984	42.712	24.631	1.00	45.31
ATOM C	205	C	ILE A	27	91.559	42.482	24.155	1.00	45.02
ATOM O	206	O	ILE A	27	90.791	41.782	24.815	1.00	44.66
ATOM C	207	CB	ILE A	27	93.924	41.612	24.084	1.00	46.44
ATOM C	208	CG1	ILE A	27	93.461	40.234	24.555	1.00	46.68
ATOM C	209	CG2	ILE A	27	95.358	41.893	24.524	1.00	46.86
ATOM C	210	CD1	ILE A	27	94.354	39.098	24.083	1.00	48.06
ATOM N	211	N	PRO A	28	91.179	43.089	23.024	1.00	45.29
ATOM C	212	CA	PRO A	28	89.836	42.959	22.453	1.00	44.96
ATOM C	213	C	PRO A	28	89.231	41.557	22.486	1.00	44.81
ATOM O	214	O	PRO A	28	88.051	41.393	22.800	1.00	44.44
ATOM C	215	CB	PRO A	28	90.027	43.474	21.031	1.00	45.44
ATOM C	216	CG	PRO A	28	91.024	44.565	21.223	1.00	45.66
ATOM C	217	CD	PRO A	28	92.031	43.934	22.166	1.00	45.97
ATOM N	218	N	SER A	29	90.035	40.549	22.167	1.00	44.03
ATOM C	219	CA	SER A	29	89.547	39.174	22.134	1.00	43.07
ATOM C	220	C	SER A	29	89.168	38.597	23.495	1.00	42.20

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ATOM O	221	O	SER A	29	88.477	37.582	23.567	1.00	42.12
ATOM C	222	CB	SER A	29	90.576	38.261	21.455	1.00	43.90
ATOM O	223	OG	SER A	29	91.766	38.166	22.214	1.00	45.30
ATOM N	224	N	ASN A	30	89.615	39.227	24.575	1.00	40.59
ATOM C	225	CA	ASN A	30	89.271	38.735	25.902	1.00	39.15
ATOM C	226	C	ASN A	30	88.079	39.489	26.491	1.00	37.08
ATOM O	227	O	ASN A	30	87.606	39.159	27.577	1.00	36.93
ATOM C	228	CB	ASN A	30	90.463	38.844	26.858	1.00	41.71
ATOM C	229	CG	ASN A	30	91.564	37.851	26.538	1.00	44.46
ATOM O	230	OD1	ASN A	30	91.296	36.703	26.186	1.00	45.63
ATOM N	231	ND2	ASN A	30	92.811	38.283	26.677	1.00	46.20
ATOM N	232	N	VAL A	31	87.595	40.497	25.774	1.00	33.45
ATOM C	233	CA	VAL A	31	86.461	41.279	26.252	1.00	31.88
ATOM C	234	C	VAL A	31	85.150	40.513	26.093	1.00	30.75
ATOM O	235	O	VAL A	31	84.858	39.981	25.025	1.00	30.55
ATOM C	236	CB	VAL A	31	86.353	42.628	25.503	1.00	30.76
ATOM C	237	CG1	VAL A	31	85.074	43.355	25.914	1.00	30.99
ATOM C	238	CG2	VAL A	31	87.568	43.491	25.817	1.00	31.39
ATOM N	239	N	ASN A	32	84.372	40.463	27.168	1.00	30.39
ATOM C	240	CA	ASN A	32	83.085	39.771	27.175	1.00	30.35
ATOM C	241	C	ASN A	32	81.968	40.802	27.058	1.00	29.35
ATOM O	242	O	ASN A	32	81.837	41.675	27.916	1.00	29.27
ATOM C	243	CB	ASN A	32	82.929	38.965	28.474	1.00	32.17
ATOM C	244	CG	ASN A	32	81.509	38.449	28.685	1.00	34.34
ATOM O	245	OD1	ASN A	32	80.751	38.273	27.736	1.00	34.02
ATOM N	246	ND2	ASN A	32	81.153	38.193	29.941	1.00	38.74
ATOM N	247	N	LEU A	33	81.166	40.705	26.001	1.00	28.15
ATOM C	248	CA	LEU A	33	80.077	41.661	25.803	1.00	27.70

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ATOM C	249	C	LEU	A	33	78.693	41.128	26.178	1.00	27.94
ATOM O	250	O	LEU	A	33	77.676	41.639	25.711	1.00	27.44
ATOM C	251	CB	LEU	A	33	80.071	42.160	24.351	1.00	27.83
ATOM C	252	CG	LEU	A	33	81.288	42.979	23.906	1.00	28.65
ATOM C	253	CD1	LEU	A	33	81.127	43.403	22.448	1.00	27.96
ATOM C	254	CD2	LEU	A	33	81.443	44.202	24.800	1.00	28.65
ATOM N	255	N	SER	A	34	78.646	40.109	27.028	1.00	28.06
ATOM C	256	CA	SER	A	34	77.361	39.559	27.457	1.00	29.26
ATOM C	257	C	SER	A	34	76.628	40.593	28.310	1.00	28.04
ATOM O	258	O	SER	A	34	77.255	41.406	28.987	1.00	27.93
ATOM C	259	CB	SER	A	34	77.574	38.283	28.268	1.00	30.15
ATOM O	260	OG	SER	A	34	78.220	37.308	27.471	1.00	35.29
ATOM N	261	N	THR	A	35	75.301	40.565	28.283	1.00	27.47
ATOM C	262	CA	THR	A	35	74.533	41.528	29.058	1.00	26.66
ATOM C	263	C	THR	A	35	73.113	41.009	29.299	1.00	26.85
ATOM O	264	O	THR	A	35	72.540	40.317	28.455	1.00	27.02
ATOM C	265	CB	THR	A	35	74.497	42.896	28.320	1.00	27.50
ATOM O	266	OG1	THR	A	35	74.222	43.949	29.252	1.00	27.27
ATOM C	267	CG2	THR	A	35	73.425	42.894	27.234	1.00	26.76
ATOM N	268	N	PRO	A	36	72.529	41.334	30.462	1.00	26.24
ATOM C	269	CA	PRO	A	36	71.175	40.887	30.795	1.00	26.48
ATOM C	270	C	PRO	A	36	70.082	41.574	29.979	1.00	26.94
ATOM O	271	O	PRO	A	36	70.166	42.769	29.683	1.00	26.63
ATOM C	272	CB	PRO	A	36	71.067	41.205	32.282	1.00	25.88
ATOM C	273	CG	PRO	A	36	71.883	42.446	32.402	1.00	25.82
ATOM C	274	CD	PRO	A	36	73.098	42.144	31.554	1.00	25.46
ATOM N	275	N	LEU	A	37	69.054	40.810	29.627	1.00	26.53
ATOM C	276	CA	LEU	A	37	67.942	41.344	28.857	1.00	26.66

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ATOM C	277	C	LEU A	37	66.705	41.564	29.724	1.00	26.63
ATOM O	278	O	LEU A	37	65.960	42.526	29.516	1.00	26.36
ATOM C	279	CB	LEU A	37	67.588	40.396	27.706	1.00	27.85
ATOM C	280	CG	LEU A	37	66.499	40.910	26.759	1.00	27.81
ATOM C	281	CD1	LEU A	37	67.061	42.044	25.911	1.00	28.43
ATOM C	282	CD2	LEU A	37	66.006	39.780	25.869	1.00	28.49
ATOM N	283	N	VAL A	38	66.483	40.684	30.699	1.00	26.11
ATOM C	284	CA	VAL A	38	65.305	40.807	31.556	1.00	26.61
ATOM C	285	C	VAL A	38	65.651	40.829	33.040	1.00	27.13
ATOM O	286	O	VAL A	38	66.667	40.279	33.461	1.00	27.11
ATOM C	287	CB	VAL A	38	64.288	39.674	31.264	1.00	26.52
ATOM C	288	CG1	VAL A	38	63.862	39.748	29.803	1.00	27.45
ATOM C	289	CG2	VAL A	38	64.902	38.310	31.562	1.00	26.40
ATOM N	290	N	LYS A	39	64.790	41.468	33.825	1.00	27.15
ATOM C	291	CA	LYS A	39	65.011	41.625	35.256	1.00	27.73
ATOM C	292	C	LYS A	39	65.216	40.348	36.058	1.00	28.72
ATOM O	293	O	LYS A	39	64.724	39.274	35.695	1.00	28.88
ATOM C	294	CB	LYS A	39	63.865	42.425	35.885	1.00	28.20
ATOM C	295	CG	LYS A	39	62.508	41.718	35.873	1.00	28.09
ATOM C	296	CD	LYS A	39	61.492	42.510	36.690	1.00	29.72
ATOM C	297	CE	LYS A	39	60.107	41.877	36.642	1.00	30.35
ATOM N	298	NZ	LYS A	39	59.162	42.618	37.526	1.00	31.05
ATOM N	299	N	PHE A	40	65.947	40.502	37.159	1.00	28.59
ATOM C	300	CA	PHE A	40	66.254	39.424	38.089	1.00	29.38
ATOM C	301	C	PHE A	40	66.508	40.026	39.469	1.00	30.67
ATOM O	302	O	PHE A	40	66.605	41.250	39.611	1.00	31.06
ATOM C	303	CB	PHE A	40	67.485	38.633	37.627	1.00	29.02
ATOM C	304	CG	PHE A	40	68.706	39.481	37.379	1.00	28.39

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ATOM C	305	CD1	PHE	A	40	68.920	40.074	36.136	1.00	29.01
ATOM C	306	CD2	PHE	A	40	69.649	39.671	38.381	1.00	28.07
ATOM C	307	CE1	PHE	A	40	70.059	40.843	35.897	1.00	28.63
ATOM C	308	CE2	PHE	A	40	70.790	40.435	38.157	1.00	28.51
ATOM C	309	CZ	PHE	A	40	70.997	41.022	36.912	1.00	28.67
ATOM N	310	N	GLN	A	41	66.609	39.168	40.482	1.00	30.52
ATOM C	311	CA	GLN	A	41	66.843	39.608	41.857	1.00	32.51
ATOM C	312	C	GLN	A	41	68.324	39.615	42.199	1.00	31.08
ATOM O	313	O	GLN	A	41	69.120	38.950	41.544	1.00	32.21
ATOM C	314	CB	GLN	A	41	66.131	38.677	42.852	1.00	34.57
ATOM C	315	CG	GLN	A	41	64.623	38.683	42.769	1.00	40.18
ATOM C	316	CD	GLN	A	41	64.029	40.014	43.189	1.00	42.08
ATOM O	317	OE1	GLN	A	41	64.187	40.451	44.333	1.00	45.71
ATOM N	318	NE2	GLN	A	41	63.345	40.667	42.263	1.00	44.39
ATOM N	319	N	LYS	A	42	68.678	40.364	43.238	1.00	30.91
ATOM C	320	CA	LYS	A	42	70.057	40.444	43.705	1.00	31.44
ATOM C	321	C	LYS	A	42	70.606	39.028	43.937	1.00	31.78
ATOM O	322	O	LYS	A	42	69.945	38.190	44.556	1.00	30.49
ATOM C	323	CB	LYS	A	42	70.106	41.241	45.009	1.00	33.17
ATOM C	324	CG	LYS	A	42	71.456	41.242	45.701	1.00	35.83
ATOM C	325	CD	LYS	A	42	71.399	42.043	46.994	1.00	38.92
ATOM C	326	CE	LYS	A	42	72.740	42.029	47.706	1.00	40.30
ATOM N	327	NZ	LYS	A	42	72.711	42.865	48.938	1.00	43.53
ATOM N	328	N	GLY	A	43	71.805	38.768	43.426	1.00	31.76
ATOM C	329	CA	GLY	A	43	72.420	37.463	43.593	1.00	31.06
ATOM C	330	C	GLY	A	43	72.125	36.484	42.473	1.00	30.81
ATOM O	331	O	GLY	A	43	72.751	35.426	42.384	1.00	30.33
ATOM N	332	N	GLN	A	44	71.170	36.822	41.615	1.00	30.18



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ATOM C	333	CA	GLN	A	44	70.817	35.946	40.507	1.00	30.45
ATOM C	334	C	GLN	A	44	71.410	36.461	39.203	1.00	31.41
ATOM O	335	O	GLN	A	44	72.075	37.494	39.172	1.00	30.58
ATOM C	336	CB	GLN	A	44	69.295	35.870	40.345	1.00	31.54
ATOM C	337	CG	GLN	A	44	68.521	35.673	41.637	1.00	32.79
ATOM C	338	CD	GLN	A	44	67.016	35.631	41.407	1.00	34.29
ATOM O	339	OE1	GLN	A	44	66.492	36.327	40.537	1.00	32.47
ATOM N	340	NE2	GLN	A	44	66.316	34.827	42.199	1.00	32.10
ATOM N	341	N	GLN	A	45	71.161	35.710	38.136	1.00	32.01
ATOM C	342	CA	GLN	A	45	71.593	36.058	36.791	1.00	33.43
ATOM C	343	C	GLN	A	45	70.299	36.153	35.992	1.00	32.33
ATOM O	344	O	GLN	A	45	69.310	35.516	36.345	1.00	31.57
ATOM C	345	CB	GLN	A	45	72.476	34.957	36.196	1.00	37.06
ATOM C	346	CG	GLN	A	45	73.829	34.819	36.864	1.00	42.03
ATOM C	347	CD	GLN	A	45	74.634	36.097	36.781	1.00	44.70
ATOM O	348	OE1	GLN	A	45	74.911	36.596	35.689	1.00	47.34
ATOM N	349	NE2	GLN	A	45	75.010	36.641	37.936	1.00	45.66
ATOM N	350	N	SER	A	46	70.299	36.945	34.926	1.00	30.96
ATOM C	351	CA	SER	A	46	69.103	37.082	34.107	1.00	30.90
ATOM C	352	C	SER	A	46	68.791	35.762	33.407	1.00	31.56
ATOM O	353	O	SER	A	46	69.700	35.004	33.078	1.00	30.43
ATOM C	354	CB	SER	A	46	69.300	38.171	33.053	1.00	29.48
ATOM O	355	OG	SER	A	46	68.130	38.324	32.276	1.00	28.63
ATOM N	356	N	GLU	A	47	67.507	35.495	33.180	1.00	32.24
ATOM C	357	CA	GLU	A	47	67.097	34.271	32.498	1.00	33.72
ATOM C	358	C	GLU	A	47	67.495	34.336	31.033	1.00	32.95
ATOM O	359	O	GLU	A	47	67.601	33.311	30.363	1.00	32.68
ATOM C	360	CB	GLU	A	47	65.587	34.078	32.614	1.00	35.36

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ATOM C	361	CG	GLU	A	47	65.118	33.791	34.027	1.00	39.32
ATOM C	362	CD	GLU	A	47	63.613	33.865	34.159	1.00	41.79
ATOM O	363	OE1	GLU	A	47	62.918	33.052	33.513	1.00	44.11
ATOM O	364	OE2	GLU	A	47	63.124	34.743	34.904	1.00	43.26
ATOM N	365	N	ILE	A	48	67.701	35.551	30.531	1.00	31.57
ATOM C	366	CA	ILE	A	48	68.114	35.736	29.143	1.00	30.16
ATOM C	367	C	ILE	A	48	69.271	36.727	29.080	1.00	29.80
ATOM O	368	O	ILE	A	48	69.148	37.869	29.521	1.00	29.23
ATOM C	369	CB	ILE	A	48	66.962	36.280	28.258	1.00	31.15
ATOM C	370	CG1	ILE	A	48	65.780	35.308	28.267	1.00	31.70
ATOM C	371	CG2	ILE	A	48	67.461	36.479	26.835	1.00	30.35
ATOM C	372	CD1	ILE	A	48	64.578	35.800	27.487	1.00	33.88
ATOM N	373	N	ASN	A	49	70.396	36.280	28.536	1.00	28.20
ATOM C	374	CA	ASN	A	49	71.567	37.129	28.403	1.00	28.79
ATOM C	375	C	ASN	A	49	71.982	37.194	26.947	1.00	28.45
ATOM O	376	O	ASN	A	49	72.204	36.160	26.309	1.00	28.24
ATOM C	377	CB	ASN	A	49	72.728	36.579	29.238	1.00	29.15
ATOM C	378	CG	ASN	A	49	72.459	36.656	30.726	1.00	30.85
ATOM O	379	OD1	ASN	A	49	72.610	37.712	31.343	1.00	29.61
ATOM N	380	ND2	ASN	A	49	72.041	35.538	31.310	1.00	30.46
ATOM N	381	N	LEU	A	50	72.061	38.407	26.412	1.00	27.38
ATOM C	382	CA	LEU	A	50	72.488	38.585	25.030	1.00	27.41
ATOM C	383	C	LEU	A	50	73.990	38.324	25.035	1.00	27.31
ATOM O	384	O	LEU	A	50	74.635	38.498	26.069	1.00	26.24
ATOM C	385	CB	LEU	A	50	72.233	40.026	24.573	1.00	27.05
ATOM C	386	CG	LEU	A	50	70.818	40.596	24.686	1.00	28.18
ATOM C	387	CD1	LEU	A	50	70.838	42.092	24.356	1.00	28.26
ATOM C	388	CD2	LEU	A	50	69.887	39.849	23.745	1.00	29.22

TABLE 7

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ATOM N	389	N	LYS A	51	74.542	37.898	23.901	1.00	28.23
ATOM C	390	CA	LYS A	51	75.978	37.666	23.804	1.00	28.76
ATOM C	391	C	LYS A	51	76.661	38.946	23.313	1.00	28.00
ATOM O	392	O	LYS A	51	77.867	39.118	23.478	1.00	27.68
ATOM C	393	CB	LYS A	51	76.275	36.463	22.897	1.00	31.27
ATOM C	394	CG	LYS A	51	75.819	35.155	23.546	1.00	32.77
ATOM C	395	CD	LYS A	51	76.238	33.915	22.771	1.00	35.29
ATOM C	396	CE	LYS A	51	75.732	32.661	23.486	1.00	36.18
ATOM N	397	NZ	LYS A	51	76.082	31.402	22.757	1.00	38.13
ATOM N	398	N	ILE A	52	75.877	39.834	22.700	1.00	26.71
ATOM C	399	CA	ILE A	52	76.359	41.150	22.277	1.00	26.00
ATOM C	400	C	ILE A	52	75.227	42.109	22.668	1.00	26.56
ATOM O	401	O	ILE A	52	74.049	41.764	22.566	1.00	26.00
ATOM C	402	CB	ILE A	52	76.689	41.247	20.756	1.00	26.91
ATOM C	403	CG1	ILE A	52	75.458	40.947	19.899	1.00	27.54
ATOM C	404	CG2	ILE A	52	77.856	40.303	20.421	1.00	27.36
ATOM C	405	CD1	ILE A	52	75.675	41.287	18.423	1.00	27.06
ATOM N	406	N	PRO A	53	75.570	43.322	23.124	1.00	25.59
ATOM C	407	CA	PRO A	53	74.590	44.326	23.556	1.00	26.47
ATOM C	408	C	PRO A	53	73.782	45.080	22.501	1.00	27.16
ATOM O	409	O	PRO A	53	73.395	46.228	22.730	1.00	26.78
ATOM C	410	CB	PRO A	53	75.439	45.269	24.400	1.00	25.56
ATOM C	411	CG	PRO A	53	76.720	45.315	23.605	1.00	25.49
ATOM C	412	CD	PRO A	53	76.945	43.853	23.222	1.00	25.76
ATOM N	413	N	LEU A	54	73.502	44.443	21.368	1.00	26.87
ATOM C	414	CA	LEU A	54	72.745	45.106	20.314	1.00	27.02
ATOM C	415	C	LEU A	54	71.426	44.404	19.979	1.00	26.78
ATOM O	416	O	LEU A	54	71.376	43.177	19.861	1.00	27.27

TABLE 7

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ATOM C	417	CB	LEU A	54	73.588	45.201	19.038	1.00	26.49
ATOM C	418	CG	LEU A	54	75.010	45.771	19.104	1.00	26.90
ATOM C	419	CD1	LEU A	54	75.588	45.807	17.692	1.00	28.33
ATOM C	420	CD2	LEU A	54	75.000	47.168	19.716	1.00	26.89
ATOM N	421	N	VAL A	55	70.359	45.186	19.847	1.00	26.28
ATOM C	422	CA	VAL A	55	69.061	44.641	19.461	1.00	26.52
ATOM C	423	C	VAL A	55	68.516	45.542	18.349	1.00	26.85
ATOM O	424	O	VAL A	55	68.753	46.751	18.353	1.00	27.05
ATOM C	425	CB	VAL A	55	68.066	44.574	20.655	1.00	26.19
ATOM C	426	CG1	VAL A	55	68.718	43.837	21.823	1.00	25.91
ATOM C	427	CG2	VAL A	55	67.614	45.963	21.064	1.00	26.54
ATOM N	428	N	SER A	56	67.812	44.958	17.381	1.00	26.45
ATOM C	429	CA	SER A	56	67.281	45.750	16.279	1.00	26.33
ATOM C	430	C	SER A	56	65.909	46.329	16.613	1.00	26.47
ATOM O	431	O	SER A	56	65.091	45.694	17.286	1.00	26.78
ATOM C	432	CB	SER A	56	67.239	44.916	14.985	1.00	27.61
ATOM O	433	OG	SER A	56	66.504	43.720	15.149	1.00	27.08
ATOM N	434	N	ALA A	57	65.687	47.556	16.152	1.00	26.29
ATOM C	435	CA	ALA A	57	64.462	48.307	16.400	1.00	26.64
ATOM C	436	C	ALA A	57	63.167	47.618	15.963	1.00	27.43
ATOM O	437	O	ALA A	57	63.161	46.798	15.045	1.00	27.98
ATOM C	438	CB	ALA A	57	64.572	49.672	15.739	1.00	25.98
ATOM N	439	N	ILE A	58	62.076	47.968	16.638	1.00	27.92
ATOM C	440	CA	ILE A	58	60.753	47.413	16.354	1.00	28.86
ATOM C	441	C	ILE A	58	60.196	48.224	15.191	1.00	29.07
ATOM O	442	O	ILE A	58	59.308	49.064	15.371	1.00	29.42
ATOM C	443	CB	ILE A	58	59.823	47.572	17.576	1.00	28.92
ATOM C	444	CG1	ILE A	58	60.574	47.170	18.852	1.00	28.75

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ATOM C	445	CG2	ILE A	58	58.578	46.718	17.397	1.00	27.62
ATOM C	446	CD1	ILE A	58	59.752	47.286	20.126	1.00	29.63
ATOM N	447	N	MET A	59	60.731	47.969	14.003	1.00	29.21
ATOM C	448	CA	MET A	59	60.344	48.714	12.811	1.00	29.85
ATOM C	449	C	MET A	59	60.187	47.851	11.565	1.00	30.08
ATOM O	450	O	MET A	59	60.970	46.929	11.330	1.00	29.39
ATOM C	451	CB	MET A	59	61.395	49.793	12.537	1.00	29.69
ATOM C	452	CG	MET A	59	61.639	50.736	13.710	1.00	29.89
ATOM S	453	SD	MET A	59	63.017	51.863	13.414	1.00	30.04
ATOM C	454	CE	MET A	59	62.383	52.830	12.049	1.00	28.55
ATOM N	455	N	GLN A	60	59.182	48.181	10.756	1.00	30.89
ATOM C	456	CA	GLN A	60	58.906	47.452	9.520	1.00	31.91
ATOM C	457	C	GLN A	60	60.127	47.431	8.606	1.00	32.39
ATOM O	458	O	GLN A	60	60.374	46.447	7.916	1.00	32.51
ATOM C	459	CB	GLN A	60	57.759	48.110	8.741	1.00	32.69
ATOM C	460	CG	GLN A	60	56.508	48.441	9.532	1.00	33.24
ATOM C	461	CD	GLN A	60	55.445	49.085	8.656	1.00	35.53
ATOM O	462	OE1	GLN A	60	55.761	49.829	7.723	1.00	35.53
ATOM N	463	NE2	GLN A	60	54.178	48.813	8.957	1.00	35.36
ATOM N	464	N	SER A	61	60.879	48.528	8.590	1.00	32.34
ATOM C	465	CA	SER A	61	62.051	48.629	7.727	1.00	32.96
ATOM C	466	C	SER A	61	63.333	48.085	8.344	1.00	32.88
ATOM O	467	O	SER A	61	64.415	48.273	7.790	1.00	34.10
ATOM C	468	CB	SER A	61	62.273	50.089	7.312	1.00	33.69
ATOM O	469	OG	SER A	61	62.544	50.910	8.437	1.00	35.94
ATOM N	470	N	VAL A	62	63.218	47.394	9.472	1.00	32.07
ATOM C	471	CA	VAL A	62	64.404	46.867	10.130	1.00	31.11
ATOM C	472	C	VAL A	62	64.348	45.411	10.572	1.00	31.10

TABLE 7

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ATOM O	473	O	VAL A	62	65.145	44.590	10.126	1.00	31.19
ATOM C	474	CB	VAL A	62	64.764	47.713	11.383	1.00	31.46
ATOM C	475	CG1	VAL A	62	65.992	47.128	12.070	1.00	30.28
ATOM C	476	CG2	VAL A	62	65.018	49.160	10.988	1.00	30.77
ATOM N	477	N	SER A	63	63.399	45.091	11.444	1.00	31.39
ATOM C	478	CA	SER A	63	63.312	43.752	12.000	1.00	31.57
ATOM C	479	C	SER A	63	62.341	42.743	11.393	1.00	32.24
ATOM O	480	O	SER A	63	61.242	42.535	11.907	1.00	31.09
ATOM C	481	CB	SER A	63	63.064	43.863	13.508	1.00	31.83
ATOM O	482	OG	SER A	63	64.118	44.590	14.129	1.00	31.09
ATOM N	483	N	GLY A	64	62.778	42.112	10.307	1.00	32.50
ATOM C	484	CA	GLY A	64	61.986	41.087	9.651	1.00	34.07
ATOM C	485	C	GLY A	64	62.598	39.756	10.051	1.00	35.58
ATOM O	486	O	GLY A	64	63.493	39.729	10.903	1.00	33.57
ATOM N	487	N	GLU A	65	62.155	38.652	9.450	1.00	36.69
ATOM C	488	CA	GLU A	65	62.704	37.350	9.821	1.00	38.49
ATOM C	489	C	GLU A	65	64.187	37.205	9.494	1.00	38.04
ATOM O	490	O	GLU A	65	64.942	36.652	10.292	1.00	37.92
ATOM C	491	CB	GLU A	65	61.913	36.202	9.171	1.00	41.36
ATOM C	492	CG	GLU A	65	61.881	36.201	7.652	1.00	46.27
ATOM C	493	CD	GLU A	65	60.758	37.049	7.076	1.00	49.42
ATOM O	494	OE1	GLU A	65	60.603	37.055	5.835	1.00	51.56
ATOM O	495	OE2	GLU A	65	60.028	37.706	7.852	1.00	51.36
ATOM N	496	N	LYS A	66	64.606	37.700	8.333	1.00	37.76
ATOM C	497	CA	LYS A	66	66.006	37.612	7.934	1.00	38.96
ATOM C	498	C	LYS A	66	66.909	38.345	8.924	1.00	37.51
ATOM O	499	O	LYS A	66	67.975	37.848	9.290	1.00	36.95
ATOM C	500	CB	LYS A	66	66.208	38.193	6.531	1.00	40.79

TABLE 7

ATOM C	501	CG	LYS A	66	65.594	37.358	5.415	1.00	45.49
ATOM C	502	CD	LYS A	66	65.912	37.944	4.042	1.00	48.08
ATOM C	503	CE	LYS A	66	65.320	37.094	2.925	1.00	49.82
ATOM N	504	NZ	LYS A	66	65.647	37.631	1.571	1.00	51.36
ATOM N	505	N	MET A	67	66.480	39.527	9.351	1.00	35.99
ATOM C	506	CA	MET A	67	67.254	40.314	10.304	1.00	34.82
ATOM C	507	C	MET A	67	67.378	39.563	11.624	1.00	34.24
ATOM O	508	O	MET A	67	68.468	39.447	12.182	1.00	33.61
ATOM C	509	CB	MET A	67	66.579	41.666	10.545	1.00	34.96
ATOM C	510	CG	MET A	67	67.298	42.561	11.546	1.00	34.38
ATOM S	511	SD	MET A	67	68.955	43.020	11.010	1.00	35.01
ATOM C	512	CE	MET A	67	68.573	44.146	9.657	1.00	33.42
ATOM N	513	N	ALA A	68	66.252	39.046	12.110	1.00	33.39
ATOM C	514	CA	ALA A	68	66.215	38.315	13.369	1.00	33.20
ATOM C	515	C	ALA A	68	67.165	37.123	13.387	1.00	33.51
ATOM O	516	O	ALA A	68	67.798	36.841	14.403	1.00	33.13
ATOM C	517	CB	ALA A	68	64.787	37.854	13.661	1.00	33.11
ATOM N	518	N	ILE A	69	67.262	36.419	12.265	1.00	33.68
ATOM C	519	CA	ILE A	69	68.147	35.265	12.182	1.00	33.04
ATOM C	520	C	ILE A	69	69.603	35.712	12.131	1.00	32.05
ATOM O	521	O	ILE A	69	70.452	35.174	12.841	1.00	33.24
ATOM C	522	CB	ILE A	69	67.827	34.409	10.933	1.00	34.02
ATOM C	523	CG1	ILE A	69	66.463	33.736	11.104	1.00	34.34
ATOM C	524	CG2	ILE A	69	68.911	33.365	10.719	1.00	33.54
ATOM C	525	CD1	ILE A	69	65.913	33.127	9.819	1.00	37.29
ATOM N	526	N	ALA A	70	69.884	36.709	11.300	1.00	31.48
ATOM C	527	CA	ALA A	70	71.236	37.225	11.149	1.00	30.65
ATOM C	528	C	ALA A	70	71.799	37.799	12.445	1.00	30.57

TABLE 7

ATOM O	529	O	ALA A	70	72.969	37.593	12.763	1.00	29.93
ATOM C	530	CB	ALA A	70	71.264	38.284	10.063	1.00	30.23
ATOM N	531	N	LEU A	71	70.967	38.523	13.188	1.00	29.53
ATOM C	532	CA	LEU A	71	71.409	39.129	14.438	1.00	29.98
ATOM C	533	C	LEU A	71	71.553	38.098	15.552	1.00	30.25
ATOM O	534	O	LEU A	71	72.517	38.141	16.314	1.00	30.96
ATOM C	535	CB	LEU A	71	70.442	40.242	14.859	1.00	28.55
ATOM C	536	CG	LEU A	71	70.809	41.061	16.103	1.00	28.68
ATOM C	537	CD1	LEU A	71	72.271	41.482	16.041	1.00	27.67
ATOM C	538	CD2	LEU A	71	69.898	42.287	16.192	1.00	28.74
ATOM N	539	N	ALA A	72	70.607	37.166	15.645	1.00	31.21
ATOM C	540	CA	ALA A	72	70.683	36.131	16.672	1.00	31.98
ATOM C	541	C	ALA A	72	71.953	35.308	16.468	1.00	32.78
ATOM O	542	O	ALA A	72	72.569	34.847	17.434	1.00	31.74
ATOM C	543	CB	ALA A	72	69.452	35.222	16.608	1.00	31.69
ATOM N	544	N	ARG A	73	72.335	35.121	15.206	1.00	33.82
ATOM C	545	CA	ARG A	73	73.533	34.354	14.876	1.00	35.76
ATOM C	546	C	ARG A	73	74.786	35.010	15.435	1.00	35.30
ATOM O	547	O	ARG A	73	75.760	34.328	15.745	1.00	34.89
ATOM C	548	CB	ARG A	73	73.680	34.200	13.358	1.00	37.37
ATOM C	549	CG	ARG A	73	72.809	33.109	12.747	1.00	39.96
ATOM C	550	CD	ARG A	73	72.927	33.093	11.228	1.00	42.81
ATOM N	551	NE	ARG A	73	72.204	31.970	10.636	1.00	45.35
ATOM C	552	CZ	ARG A	73	71.945	31.844	9.337	1.00	47.16
ATOM N	553	NH1	ARG A	73	72.344	32.773	8.479	1.00	47.06
ATOM N	554	NH2	ARG A	73	71.289	30.778	8.894	1.00	48.38
ATOM N	555	N	GLU A	74	74.755	36.335	15.565	1.00	35.55
ATOM C	556	CA	GLU A	74	75.899	37.069	16.088	1.00	34.99



ATOM C	557	C	GLU A	74	75.796	37.327	17.591	1.00	33.84
ATOM O	558	O	GLU A	74	76.693	37.923	18.181	1.00	33.27
ATOM C	559	CB	GLU A	74	76.065	38.396	15.342	1.00	37.11
ATOM C	560	CG	GLU A	74	76.218	38.254	13.826	1.00	39.97
ATOM C	561	CD	GLU A	74	77.309	37.270	13.418	1.00	43.26
ATOM O	562	OE1	GLU A	74	78.448	37.383	13.924	1.00	44.46
ATOM O	563	OE2	GLU A	74	77.027	36.384	12.580	1.00	44.73
ATOM N	564	N	GLY A	75	74.702	36.893	18.209	1.00	32.10
ATOM C	565	CA	GLY A	75	74.562	37.081	19.645	1.00	31.13
ATOM C	566	C	GLY A	75	73.553	38.107	20.123	1.00	30.09
ATOM O	567	O	GLY A	75	73.352	38.256	21.330	1.00	29.67
ATOM N	568	N	GLY A	76	72.926	38.815	19.190	1.00	28.66
ATOM C	569	CA	GLY A	76	71.937	39.814	19.559	1.00	28.32
ATOM C	570	C	GLY A	76	70.526	39.294	19.342	1.00	28.09
ATOM O	571	O	GLY A	76	70.325	38.101	19.089	1.00	27.76
ATOM N	572	N	ILE A	77	69.541	40.181	19.436	1.00	27.98
ATOM C	573	CA	ILE A	77	68.157	39.774	19.239	1.00	27.37
ATOM C	574	C	ILE A	77	67.363	40.857	18.497	1.00	28.41
ATOM O	575	O	ILE A	77	67.632	42.053	18.638	1.00	26.87
ATOM C	576	CB	ILE A	77	67.491	39.456	20.603	1.00	27.78
ATOM C	577	CG1	ILE A	77	66.246	38.592	20.392	1.00	27.09
ATOM C	578	CG2	ILE A	77	67.128	40.757	21.337	1.00	26.59
ATOM C	579	CD1	ILE A	77	65.560	38.187	21.679	1.00	25.93
ATOM N	580	N	SER A	78	66.404	40.430	17.682	1.00	28.44
ATOM C	581	CA	SER A	78	65.570	41.364	16.936	1.00	28.97
ATOM C	582	C	SER A	78	64.167	41.354	17.512	1.00	28.83
ATOM O	583	O	SER A	78	63.714	40.342	18.041	1.00	28.85
ATOM C	584	CB	SER A	78	65.487	40.971	15.457	1.00	27.56

TABLE 7

ATOM O	585	OG	SER A	78	66.716	41.168	14.790	1.00	28.48
ATOM N	586	N	PHE A	79	63.487	42.490	17.418	1.00	29.16
ATOM C	587	CA	PHE A	79	62.117	42.591	17.893	1.00	29.89
ATOM C	588	C	PHE A	79	61.237	42.769	16.668	1.00	30.19
ATOM O	589	O	PHE A	79	61.060	43.879	16.176	1.00	30.27
ATOM C	590	CB	PHE A	79	61.941	43.779	18.847	1.00	29.28
ATOM C	591	CG	PHE A	79	62.503	43.536	20.216	1.00	29.03
ATOM C	592	CD1	PHE A	79	63.855	43.737	20.477	1.00	30.34
ATOM C	593	CD2	PHE A	79	61.687	43.061	21.237	1.00	29.64
ATOM C	594	CE1	PHE A	79	64.387	43.467	21.741	1.00	30.52
ATOM C	595	CE2	PHE A	79	62.207	42.786	22.502	1.00	30.51
ATOM C	596	CZ	PHE A	79	63.561	42.990	22.753	1.00	29.61
ATOM N	597	N	ILE A	80	60.708	41.656	16.170	1.00	31.21
ATOM C	598	CA	ILE A	80	59.844	41.659	14.993	1.00	30.53
ATOM C	599	C	ILE A	80	58.766	42.728	15.137	1.00	30.49
ATOM O	600	O	ILE A	80	58.047	42.761	16.143	1.00	30.23
ATOM C	601	CB	ILE A	80	59.172	40.282	14.809	1.00	30.87
ATOM C	602	CG1	ILE A	80	60.240	39.187	14.721	1.00	30.68
ATOM C	603	CG2	ILE A	80	58.303	40.288	13.561	1.00	31.61
ATOM C	604	CD1	ILE A	80	61.174	39.319	13.536	1.00	30.88
ATOM N	605	N	PHE A	81	58.640	43.591	14.131	1.00	30.29
ATOM C	606	CA	PHE A	81	57.660	44.666	14.195	1.00	31.74
ATOM C	607	C	PHE A	81	56.216	44.205	14.385	1.00	32.15
ATOM O	608	O	PHE A	81	55.799	43.178	13.851	1.00	32.55
ATOM C	609	CB	PHE A	81	57.775	45.593	12.967	1.00	31.76
ATOM C	610	CG	PHE A	81	57.565	44.914	11.638	1.00	31.76
ATOM C	611	CD1	PHE A	81	58.575	44.152	11.055	1.00	31.23
ATOM C	612	CD2	PHE A	81	56.370	45.084	10.942	1.00	31.53

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ATOM C	613	CE1	PHE	A	81	58.401	43.574	9.793	1.00	31.24
ATOM C	614	CE2	PHE	A	81	56.184	44.510	9.681	1.00	31.41
ATOM C	615	CZ	PHE	A	81	57.202	43.755	9.106	1.00	32.04
ATOM N	616	N	GLY	A	82	55.467	44.976	15.168	1.00	32.45
ATOM C	617	CA	GLY	A	82	54.080	44.652	15.443	1.00	33.29
ATOM C	618	C	GLY	A	82	53.117	45.479	14.616	1.00	34.37
ATOM O	619	O	GLY	A	82	51.899	45.351	14.761	1.00	34.23
ATOM N	620	N	SER	A	83	53.661	46.335	13.756	1.00	34.06
ATOM C	621	CA	SER	A	83	52.844	47.173	12.886	1.00	34.88
ATOM C	622	C	SER	A	83	52.470	46.370	11.645	1.00	35.53
ATOM O	623	O	SER	A	83	52.775	46.745	10.513	1.00	34.34
ATOM C	624	CB	SER	A	83	53.607	48.440	12.491	1.00	34.13
ATOM O	625	OG	SER	A	83	54.875	48.115	11.961	1.00	35.16
ATOM N	626	N	GLN	A	84	51.823	45.238	11.893	1.00	36.05
ATOM C	627	CA	GLN	A	84	51.359	44.337	10.851	1.00	36.48
ATOM C	628	C	GLN	A	84	50.308	43.459	11.520	1.00	36.44
ATOM O	629	O	GLN	A	84	50.125	43.532	12.737	1.00	35.78
ATOM C	630	CB	GLN	A	84	52.515	43.488	10.317	1.00	36.59
ATOM C	631	CG	GLN	A	84	53.156	42.571	11.342	1.00	37.16
ATOM C	632	CD	GLN	A	84	54.277	41.745	10.747	1.00	37.80
ATOM O	633	OE1	GLN	A	84	54.114	41.137	9.689	1.00	38.49
ATOM N	634	NE2	GLN	A	84	55.422	41.710	11.428	1.00	36.72
ATOM N	635	N	SER	A	85	49.617	42.634	10.742	1.00	37.40
ATOM C	636	CA	SER	A	85	48.582	41.775	11.307	1.00	37.95
ATOM C	637	C	SER	A	85	49.166	40.812	12.333	1.00	38.81
ATOM O	638	O	SER	A	85	50.351	40.479	12.283	1.00	39.00
ATOM C	639	CB	SER	A	85	47.886	40.974	10.205	1.00	37.33
ATOM O	640	OG	SER	A	85	48.700	39.902	9.768	1.00	38.10

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ATOM N	641	N	ILE A	86	48.325	40.372	13.262	1.00	38.89
ATOM C	642	CA	ILE A	86	48.742	39.439	14.301	1.00	40.23
ATOM C	643	C	ILE A	86	49.236	38.140	13.665	1.00	41.35
ATOM O	644	O	ILE A	86	50.240	37.569	14.090	1.00	41.06
ATOM C	645	CB	ILE A	86	47.569	39.127	15.261	1.00	40.08
ATOM C	646	CG1	ILE A	86	47.192	40.391	16.041	1.00	40.14
ATOM C	647	CG2	ILE A	86	47.945	37.992	16.203	1.00	39.43
ATOM C	648	CD1	ILE A	86	46.003	40.226	16.973	1.00	39.32
ATOM N	649	N	GLU A	87	48.525	37.687	12.638	1.00	41.92
ATOM C	650	CA	GLU A	87	48.877	36.460	11.932	1.00	42.93
ATOM C	651	C	GLU A	87	50.228	36.595	11.230	1.00	41.66
ATOM O	652	O	GLU A	87	51.057	35.687	11.272	1.00	41.43
ATOM C	653	CB	GLU A	87	47.800	36.122	10.893	1.00	45.26
ATOM C	654	CG	GLU A	87	46.395	35.876	11.460	1.00	48.53
ATOM C	655	CD	GLU A	87	45.798	37.088	12.173	1.00	50.40
ATOM O	656	OE1	GLU A	87	45.867	38.211	11.625	1.00	50.61
ATOM O	657	OE2	GLU A	87	45.243	36.910	13.282	1.00	52.40
ATOM N	658	N	SER A	88	50.439	37.736	10.585	1.00	40.93
ATOM C	659	CA	SER A	88	51.677	37.993	9.857	1.00	41.02
ATOM C	660	C	SER A	88	52.898	38.079	10.777	1.00	39.71
ATOM O	661	O	SER A	88	53.979	37.595	10.438	1.00	39.05
ATOM C	662	CB	SER A	88	51.540	39.292	9.058	1.00	41.43
ATOM O	663	OG	SER A	88	52.675	39.507	8.242	1.00	44.62
ATOM N	664	N	GLN A	89	52.726	38.701	11.938	1.00	38.95
ATOM C	665	CA	GLN A	89	53.827	38.837	12.886	1.00	38.02
ATOM C	666	C	GLN A	89	54.165	37.484	13.506	1.00	38.23
ATOM O	667	O	GLN A	89	55.333	37.121	13.625	1.00	38.13
ATOM C	668	CB	GLN A	89	53.465	39.847	13.984	1.00	36.71

ATOM C	669	CG	GLN	A	89	54.536	40.002	15.067	1.00	34.83
ATOM C	670	CD	GLN	A	89	54.169	41.044	16.110	1.00	33.42
ATOM O	671	OE1	GLN	A	89	52.998	41.217	16.443	1.00	32.85
ATOM N	672	NE2	GLN	A	89	55.175	41.732	16.644	1.00	31.51
ATOM N	673	N	ALA	A	90	53.137	36.734	13.890	1.00	38.39
ATOM C	674	CA	ALA	A	90	53.343	35.419	14.487	1.00	38.40
ATOM C	675	C	ALA	A	90	54.050	34.494	13.500	1.00	38.83
ATOM O	676	O	ALA	A	90	54.847	33.639	13.894	1.00	38.82
ATOM C	677	CB	ALA	A	90	52.006	34.822	14.908	1.00	38.88
ATOM N	678	N	ALA	A	91	53.762	34.670	12.215	1.00	39.13
ATOM C	679	CA	ALA	A	91	54.383	33.849	11.186	1.00	39.02
ATOM C	680	C	ALA	A	91	55.893	34.091	11.157	1.00	39.29
ATOM O	681	O	ALA	A	91	56.673	33.150	11.035	1.00	38.36
ATOM C	682	CB	ALA	A	91	53.767	34.157	9.820	1.00	39.60
ATOM N	683	N	MET	A	92	56.306	35.351	11.272	1.00	38.81
ATOM C	684	CA	MET	A	92	57.733	35.670	11.263	1.00	38.78
ATOM C	685	C	MET	A	92	58.426	35.071	12.480	1.00	37.97
ATOM O	686	O	MET	A	92	59.518	34.516	12.369	1.00	38.17
ATOM C	687	CB	MET	A	92	57.959	37.184	11.251	1.00	38.46
ATOM C	688	CG	MET	A	92	57.461	37.876	10.009	1.00	39.51
ATOM S	689	SD	MET	A	92	57.978	39.598	9.950	1.00	38.93
ATOM C	690	CE	MET	A	92	57.344	40.065	8.337	1.00	39.38
ATOM N	691	N	VAL	A	93	57.789	35.193	13.641	1.00	37.66
ATOM C	692	CA	VAL	A	93	58.348	34.649	14.872	1.00	37.49
ATOM C	693	C	VAL	A	93	58.501	33.136	14.725	1.00	38.78
ATOM O	694	O	VAL	A	93	59.547	32.572	15.042	1.00	37.88
ATOM C	695	CB	VAL	A	93	57.434	34.951	16.082	1.00	37.04
ATOM C	696	CG1	VAL	A	93	57.888	34.152	17.294	1.00	36.02

ATOM C	697	CG2	VAL	A	93	57.460	36.443	16.394	1.00	36.04
ATOM N	698	N	HIS	A	94	57.451	32.486	14.231	1.00	39.37
ATOM C	699	CA	HIS	A	94	57.474	31.039	14.040	1.00	39.99
ATOM C	700	C	HIS	A	94	58.616	30.632	13.110	1.00	39.10
ATOM O	701	O	HIS	A	94	59.331	29.663	13.378	1.00	39.42
ATOM C	702	CB	HIS	A	94	56.144	30.560	13.449	1.00	41.81
ATOM C	703	CG	HIS	A	94	56.048	29.072	13.312	1.00	43.35
ATOM N	704	ND1	HIS	A	94	55.746	28.244	14.372	1.00	44.55
ATOM C	705	CD2	HIS	A	94	56.249	28.261	12.247	1.00	44.14
ATOM C	706	CE1	HIS	A	94	55.765	26.987	13.966	1.00	44.38
ATOM N	707	NE2	HIS	A	94	56.069	26.970	12.681	1.00	44.90
ATOM N	708	N	ALA	A	95	58.784	31.377	12.022	1.00	38.67
ATOM C	709	CA	ALA	A	95	59.828	31.093	11.043	1.00	38.33
ATOM C	710	C	ALA	A	95	61.224	31.175	11.648	1.00	38.74
ATOM O	711	O	ALA	A	95	62.107	30.393	11.299	1.00	37.70
ATOM C	712	CB	ALA	A	95	59.717	32.055	9.866	1.00	38.60
ATOM N	713	N	VAL	A	96	61.429	32.126	12.554	1.00	38.74
ATOM C	714	CA	VAL	A	96	62.732	32.279	13.186	1.00	38.66
ATOM C	715	C	VAL	A	96	62.972	31.145	14.179	1.00	38.92
ATOM O	716	O	VAL	A	96	64.054	30.558	14.212	1.00	39.96
ATOM C	717	CB	VAL	A	96	62.843	33.640	13.920	1.00	38.15
ATOM C	718	CG1	VAL	A	96	64.174	33.738	14.642	1.00	37.72
ATOM C	719	CG2	VAL	A	96	62.709	34.776	12.919	1.00	38.27
ATOM N	720	N	LYS	A	97	61.958	30.828	14.976	1.00	39.73
ATOM C	721	CA	LYS	A	97	62.081	29.767	15.969	1.00	40.96
ATOM C	722	C	LYS	A	97	62.273	28.383	15.351	1.00	42.44
ATOM O	723	O	LYS	A	97	62.860	27.502	15.977	1.00	42.21
ATOM C	724	CB	LYS	A	97	60.856	29.750	16.892	1.00	40.24

TABLE 7

ATOM C	725	CG	LYS A	97	60.659	31.021	17.716	1.00	39.72
ATOM C	726	CD	LYS A	97	61.884	31.343	18.578	1.00	38.30
ATOM C	727	CE	LYS A	97	62.148	30.271	19.627	1.00	37.68
ATOM N	728	NZ	LYS A	97	63.372	30.567	20.429	1.00	37.01
ATOM N	729	N	ASN A	98	61.783	28.187	14.129	1.00	44.02
ATOM C	730	CA	ASN A	98	61.917	26.886	13.474	1.00	46.56
ATOM C	731	C	ASN A	98	62.802	26.915	12.232	1.00	47.43
ATOM O	732	O	ASN A	98	62.605	26.126	11.307	1.00	47.95
ATOM C	733	CB	ASN A	98	60.537	26.336	13.096	1.00	47.77
ATOM C	734	CG	ASN A	98	59.630	26.158	14.297	1.00	49.18
ATOM O	735	OD1	ASN A	98	59.106	27.127	14.843	1.00	50.44
ATOM N	736	ND2	ASN A	98	59.447	24.912	14.721	1.00	50.23
ATOM N	737	N	PHE A	99	63.784	27.811	12.215	1.00	48.01
ATOM C	738	CA	PHE A	99	64.676	27.927	11.068	1.00	48.77
ATOM C	739	C	PHE A	99	65.630	26.745	10.914	1.00	49.32
ATOM O	740	O	PHE A	99	66.000	26.386	9.798	1.00	49.30
ATOM C	741	CB	PHE A	99	65.496	29.214	11.161	1.00	48.62
ATOM C	742	CG	PHE A	99	66.281	29.521	9.916	1.00	48.84
ATOM C	743	CD1	PHE A	99	65.631	29.895	8.745	1.00	48.95
ATOM C	744	CD2	PHE A	99	67.669	29.439	9.914	1.00	49.12
ATOM C	745	CE1	PHE A	99	66.353	30.184	7.590	1.00	49.40
ATOM C	746	CE2	PHE A	99	68.399	29.726	8.765	1.00	48.92
ATOM C	747	CZ	PHE A	99	67.741	30.100	7.602	1.00	49.64
ATOM N	748	N	LYS A	100	66.032	26.147	12.031	1.00	49.95
ATOM C	749	CA	LYS A	100	66.957	25.017	11.992	1.00	51.02
ATOM C	750	C	LYS A	100	66.268	23.675	11.766	1.00	51.54
ATOM O	751	O	LYS A	100	66.911	22.628	11.824	1.00	51.71
ATOM C	752	CB	LYS A	100	67.771	24.953	13.287	1.00	51.20

TABLE 7

ATOM C	753	CG	LYS A 100	68.664	26.160	13.528	1.00	51.10
ATOM C	754	CD	LYS A 100	69.464	25.986	14.808	1.00	51.19
ATOM C	755	CE	LYS A 100	70.428	27.136	15.032	1.00	50.48
ATOM N	756	NZ	LYS A 100	71.198	26.947	16.290	1.00	50.06
ATOM N	757	N	ALA A 101	64.965	23.708	11.508	1.00	52.15
ATOM C	758	CA	ALA A 101	64.201	22.486	11.272	1.00	52.52
ATOM C	759	C	ALA A 101	64.673	21.777	10.003	1.00	52.76
ATOM O	760	O	ALA A 101	64.913	22.413	8.975	1.00	52.56
ATOM C	761	CB	ALA A 101	62.717	22.811	11.168	1.00	52.86
ATOM N	762	N	HIS A 222	79.141	30.211	17.140	1.00	53.16
ATOM C	763	CA	HIS A 222	79.966	30.550	18.294	1.00	53.11
ATOM C	764	C	HIS A 222	79.233	31.452	19.280	1.00	51.53
ATOM O	765	O	HIS A 222	79.099	31.117	20.458	1.00	51.93
ATOM C	766	CB	HIS A 222	81.257	31.242	17.844	1.00	55.36
ATOM C	767	CG	HIS A 222	82.390	30.299	17.582	1.00	57.46
ATOM N	768	ND1	HIS A 222	82.940	29.508	18.568	1.00	58.71
ATOM C	769	CD2	HIS A 222	83.087	30.032	16.452	1.00	58.36
ATOM C	770	CE1	HIS A 222	83.928	28.794	18.056	1.00	59.17
ATOM N	771	NE2	HIS A 222	84.038	29.093	16.774	1.00	59.10
ATOM N	772	N	ASN A 223	78.766	32.597	18.799	1.00	49.32
ATOM C	773	CA	ASN A 223	78.056	33.540	19.653	1.00	47.79
ATOM C	774	C	ASN A 223	76.565	33.582	19.357	1.00	45.63
ATOM O	775	O	ASN A 223	75.905	34.587	19.624	1.00	44.59
ATOM C	776	CB	ASN A 223	78.643	34.945	19.496	1.00	49.26
ATOM C	777	CG	ASN A 223	80.075	35.035	19.981	1.00	50.67
ATOM O	778	OD1	ASN A 223	80.360	34.793	21.154	1.00	51.68
ATOM N	779	ND2	ASN A 223	80.986	35.387	19.079	1.00	52.28
ATOM N	780	N	GLU A 224	76.029	32.498	18.807	1.00	43.13



TABLE 7

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ATOM C	781	CA	GLU A 224	74.606	32.467	18.503	1.00	41.15
ATOM C	782	C	GLU A 224	73.799	32.540	19.786	1.00	38.97
ATOM O	783	O	GLU A 224	74.153	31.927	20.792	1.00	38.56
ATOM C	784	CB	GLU A 224	74.227	31.193	17.739	1.00	42.39
ATOM C	785	CG	GLU A 224	74.553	29.893	18.462	1.00	44.37
ATOM C	786	CD	GLU A 224	73.820	28.693	17.876	1.00	45.22
ATOM O	787	OE1	GLU A 224	73.539	28.698	16.658	1.00	45.16
ATOM O	788	OE2	GLU A 224	73.535	27.741	18.632	1.00	45.27
ATOM N	789	N	LEU A 225	72.718	33.309	19.747	1.00	37.03
ATOM C	790	CA	LEU A 225	71.842	33.454	20.897	1.00	36.33
ATOM C	791	C	LEU A 225	70.674	32.500	20.682	1.00	36.34
ATOM O	792	O	LEU A 225	69.849	32.710	19.792	1.00	34.87
ATOM C	793	CB	LEU A 225	71.333	34.891	20.999	1.00	35.11
ATOM C	794	CG	LEU A 225	70.432	35.181	22.200	1.00	34.22
ATOM C	795	CD1	LEU A 225	71.185	34.882	23.490	1.00	34.98
ATOM C	796	CD2	LEU A 225	69.981	36.633	22.161	1.00	33.29
ATOM N	797	N	VAL A 226	70.608	31.453	21.500	1.00	36.84
ATOM C	798	CA	VAL A 226	69.557	30.450	21.369	1.00	37.69
ATOM C	799	C	VAL A 226	68.924	30.035	22.693	1.00	38.39
ATOM O	800	O	VAL A 226	69.410	30.390	23.769	1.00	38.54
ATOM C	801	CB	VAL A 226	70.108	29.174	20.702	1.00	37.69
ATOM C	802	CG1	VAL A 226	70.616	29.486	19.306	1.00	36.12
ATOM C	803	CG2	VAL A 226	71.221	28.589	21.560	1.00	38.03
ATOM N	804	N	ASP A 227	67.832	29.280	22.600	1.00	39.17
ATOM C	805	CA	ASP A 227	67.143	28.782	23.780	1.00	39.84
ATOM C	806	C	ASP A 227	67.697	27.398	24.129	1.00	41.46
ATOM O	807	O	ASP A 227	68.671	26.944	23.526	1.00	41.37
ATOM C	808	CB	ASP A 227	65.625	28.702	23.543	1.00	39.27

TABLE 7

ATOM C	809	CG	ASP A 227	65.253	27.900	22.299	1.00	38.93
ATOM O	810	OD1	ASP A 227	65.938	26.903	21.987	1.00	38.27
ATOM O	811	OD2	ASP A 227	64.253	28.259	21.639	1.00	38.73
ATOM N	812	N	SER A 228	67.073	26.733	25.096	1.00	42.85
ATOM C	813	CA	SER A 228	67.510	25.408	25.535	1.00	44.79
ATOM C	814	C	SER A 228	67.415	24.358	24.428	1.00	45.78
ATOM O	815	O	SER A 228	68.052	23.305	24.502	1.00	46.20
ATOM C	816	CB	SER A 228	66.680	24.961	26.740	1.00	44.77
ATOM O	817	OG	SER A 228	65.301	24.915	26.413	1.00	45.35
ATOM N	818	N	GLN A 229	66.618	24.653	23.405	1.00	46.62
ATOM C	819	CA	GLN A 229	66.433	23.748	22.278	1.00	47.22
ATOM C	820	C	GLN A 229	67.327	24.128	21.102	1.00	46.93
ATOM O	821	O	GLN A 229	67.181	23.595	20.000	1.00	46.64
ATOM C	822	CB	GLN A 229	64.967	23.756	21.841	1.00	48.67
ATOM C	823	CG	GLN A 229	64.029	23.082	22.828	1.00	51.08
ATOM C	824	CD	GLN A 229	62.568	23.334	22.512	1.00	52.25
ATOM O	825	OE1	GLN A 229	62.036	24.405	22.800	1.00	53.70
ATOM N	826	NE2	GLN A 229	61.913	22.349	21.907	1.00	53.63
ATOM N	827	N	LYS A 230	68.249	25.055	21.346	1.00	46.17
ATOM C	828	CA	LYS A 230	69.188	25.512	20.324	1.00	45.18
ATOM C	829	C	LYS A 230	68.553	26.317	19.195	1.00	43.43
ATOM O	830	O	LYS A 230	69.146	26.471	18.126	1.00	44.02
ATOM C	831	CB	LYS A 230	69.950	24.318	19.742	1.00	46.95
ATOM C	832	CG	LYS A 230	70.781	23.563	20.771	1.00	48.94
ATOM C	833	CD	LYS A 230	71.905	24.431	21.332	1.00	51.11
ATOM C	834	CE	LYS A 230	72.929	24.788	20.257	1.00	52.17
ATOM N	835	NZ	LYS A 230	74.049	25.620	20.790	1.00	53.38
ATOM N	836	N	ARG A 231	67.353	26.836	19.429	1.00	41.91

ATOM	837	CA	ARG A 231	66.671	27.648	18.424	1.00	40.32
C								
ATOM	838	C	ARG A 231	66.997	29.116	18.691	1.00	38.38
C								
ATOM	839	O	ARG A 231	67.125	29.528	19.843	1.00	36.84
O								
ATOM	840	CB	ARG A 231	65.159	27.435	18.504	1.00	42.41
C								
ATOM	841	CG	ARG A 231	64.729	25.994	18.290	1.00	45.13
C								
ATOM	842	CD	ARG A 231	63.663	25.608	19.290	1.00	47.63
C								
ATOM	843	NE	ARG A 231	62.397	26.291	19.050	1.00	50.64
N								
ATOM	844	CZ	ARG A 231	61.549	26.636	20.013	1.00	51.82
C								
ATOM	845	NH1	ARG A 231	61.842	26.371	21.277	1.00	53.05
N								
ATOM	846	NH2	ARG A 231	60.401	27.230	19.712	1.00	52.91
N								
ATOM	847	N	TYR A 232	67.140	29.896	17.627	1.00	36.74
N								
ATOM	848	CA	TYR A 232	67.451	31.313	17.763	1.00	35.61
C								
ATOM	849	C	TYR A 232	66.388	32.035	18.579	1.00	34.70
C								
ATOM	850	O	TYR A 232	65.193	31.755	18.453	1.00	33.91
O								
ATOM	851	CB	TYR A 232	67.538	31.976	16.390	1.00	36.14
C								
ATOM	852	CG	TYR A 232	68.648	31.455	15.517	1.00	37.40
C								
ATOM	853	CD1	TYR A 232	69.973	31.464	15.955	1.00	37.55
C								
ATOM	854	CD2	TYR A 232	68.377	30.966	14.241	1.00	38.07
C								
ATOM	855	CE1	TYR A 232	71.003	30.996	15.136	1.00	39.02
C								
ATOM	856	CE2	TYR A 232	69.396	30.498	13.419	1.00	39.05
C								
ATOM	857	CZ	TYR A 232	70.703	30.516	13.870	1.00	39.19
C								
ATOM	858	OH	TYR A 232	71.704	30.060	13.045	1.00	40.49
O								
ATOM	859	N	LEU A 233	66.823	32.964	19.420	1.00	33.09
N								
ATOM	860	CA	LEU A 233	65.877	33.726	20.214	1.00	32.70
C								
ATOM	861	C	LEU A 233	65.359	34.854	19.338	1.00	31.76
C								
ATOM	862	O	LEU A 233	66.051	35.321	18.431	1.00	32.09
O								
ATOM	863	CB	LEU A 233	66.541	34.310	21.467	1.00	32.69
C								
ATOM	864	CG	LEU A 233	67.114	33.357	22.522	1.00	33.44
C								

TABLE 7

ATOM C	865	CD1	LEU A 233	67.532	34.178	23.738	1.00	33.23
ATOM C	866	CD2	LEU A 233	66.084	32.316	22.936	1.00	33.22
ATOM N	867	N	VAL A 234	64.132	35.281	19.598	1.00	32.10
ATOM C	868	CA	VAL A 234	63.539	36.365	18.839	1.00	31.38
ATOM C	869	C	VAL A 234	62.535	37.088	19.723	1.00	30.84
ATOM O	870	O	VAL A 234	61.919	36.487	20.601	1.00	30.80
ATOM C	871	CB	VAL A 234	62.832	35.845	17.560	1.00	31.94
ATOM C	872	CG1	VAL A 234	61.608	35.011	17.930	1.00	31.25
ATOM C	873	CG2	VAL A 234	62.448	37.013	16.672	1.00	30.99
ATOM N	874	N	GLY A 235	62.400	38.391	19.508	1.00	30.91
ATOM C	875	CA	GLY A 235	61.456	39.164	20.286	1.00	30.22
ATOM C	876	C	GLY A 235	60.382	39.673	19.349	1.00	29.78
ATOM O	877	O	GLY A 235	60.501	39.517	18.136	1.00	29.75
ATOM N	878	N	ALA A 236	59.336	40.276	19.904	1.00	29.91
ATOM C	879	CA	ALA A 236	58.255	40.811	19.093	1.00	29.86
ATOM C	880	C	ALA A 236	57.639	42.027	19.774	1.00	29.27
ATOM O	881	O	ALA A 236	57.439	42.037	20.986	1.00	29.23
ATOM C	882	CB	ALA A 236	57.192	39.741	18.868	1.00	30.79
ATOM N	883	N	GLY A 237	57.345	43.054	18.987	1.00	29.87
ATOM C	884	CA	GLY A 237	56.745	44.249	19.544	1.00	29.77
ATOM C	885	C	GLY A 237	55.242	44.109	19.649	1.00	30.45
ATOM O	886	O	GLY A 237	54.626	43.420	18.839	1.00	30.39
ATOM N	887	N	ILE A 238	54.650	44.744	20.656	1.00	29.85
ATOM C	888	CA	ILE A 238	53.206	44.703	20.835	1.00	30.46
ATOM C	889	C	ILE A 238	52.708	46.115	21.130	1.00	31.10
ATOM O	890	O	ILE A 238	53.493	47.003	21.470	1.00	30.41
ATOM C	891	CB	ILE A 238	52.788	43.767	22.001	1.00	29.94
ATOM C	892	CG1	ILE A 238	53.310	44.313	23.333	1.00	30.64

TABLE 7

ATOM C	893	CG2	ILE	A	238	53.322	42.357	21.758	1.00	29.80
ATOM C	894	CD1	ILE	A	238	52.808	43.550	24.556	1.00	31.03
ATOM N	895	N	ASN	A	239	51.406	46.328	20.980	1.00	31.30
ATOM C	896	CA	ASN	A	239	50.825	47.632	21.249	1.00	30.86
ATOM C	897	C	ASN	A	239	49.859	47.518	22.419	1.00	31.81
ATOM O	898	O	ASN	A	239	49.535	46.416	22.862	1.00	30.42
ATOM C	899	CB	ASN	A	239	50.108	48.171	20.006	1.00	31.76
ATOM C	900	CG	ASN	A	239	49.028	47.231	19.495	1.00	31.45
ATOM O	901	OD1	ASN	A	239	48.019	47.004	20.160	1.00	32.62
ATOM N	902	ND2	ASN	A	239	49.240	46.678	18.309	1.00	32.41
ATOM N	903	N	THR	A	240	49.406	48.660	22.921	1.00	32.10
ATOM C	904	CA	THR	A	240	48.494	48.686	24.054	1.00	32.56
ATOM C	905	C	THR	A	240	47.025	48.523	23.648	1.00	34.33
ATOM O	906	O	THR	A	240	46.130	48.681	24.477	1.00	33.93
ATOM C	907	CB	THR	A	240	48.653	50.004	24.831	1.00	32.45
ATOM O	908	OG1	THR	A	240	48.432	51.107	23.941	1.00	31.46
ATOM C	909	CG2	THR	A	240	50.065	50.112	25.418	1.00	31.19
ATOM N	910	N	ARG	A	241	46.787	48.179	22.385	1.00	35.96
ATOM C	911	CA	ARG	A	241	45.426	48.032	21.873	1.00	39.04
ATOM C	912	C	ARG	A	241	44.919	46.596	21.719	1.00	39.35
ATOM O	913	O	ARG	A	241	43.981	46.188	22.406	1.00	40.01
ATOM C	914	CB	ARG	A	241	45.313	48.743	20.522	1.00	41.18
ATOM C	915	CG	ARG	A	241	45.852	50.167	20.516	1.00	45.22
ATOM C	916	CD	ARG	A	241	44.809	51.195	20.920	1.00	48.22
ATOM N	917	NE	ARG	A	241	43.702	51.247	19.968	1.00	50.77
ATOM C	918	CZ	ARG	A	241	42.962	52.329	19.735	1.00	52.50
ATOM N	919	NH1	ARG	A	241	43.211	53.461	20.383	1.00	52.88
ATOM N	920	NH2	ARG	A	241	41.971	52.279	18.853	1.00	52.52

TABLE 7

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ATOM N	921	N	ASP A 242	45.532	45.836	20.816	1.00	39.54
ATOM C	922	CA	ASP A 242	45.105	44.459	20.557	1.00	40.21
ATOM C	923	C	ASP A 242	45.938	43.371	21.230	1.00	39.85
ATOM O	924	O	ASP A 242	46.016	42.253	20.723	1.00	40.56
ATOM C	925	CB	ASP A 242	45.087	44.192	19.045	1.00	40.36
ATOM C	926	CG	ASP A 242	46.461	44.345	18.399	1.00	40.93
ATOM O	927	OD1	ASP A 242	47.480	44.013	19.045	1.00	41.17
ATOM O	928	OD2	ASP A 242	46.526	44.781	17.230	1.00	41.45
ATOM N	929	N	PHE A 243	46.537	43.681	22.373	1.00	39.48
ATOM C	930	CA	PHE A 243	47.381	42.712	23.066	1.00	39.13
ATOM C	931	C	PHE A 243	46.677	41.442	23.547	1.00	39.39
ATOM O	932	O	PHE A 243	47.293	40.380	23.604	1.00	38.77
ATOM C	933	CB	PHE A 243	48.108	43.392	24.235	1.00	37.88
ATOM C	934	CG	PHE A 243	47.198	43.915	25.305	1.00	37.59
ATOM C	935	CD1	PHE A 243	46.746	43.082	26.323	1.00	37.35
ATOM C	936	CD2	PHE A 243	46.797	45.248	25.301	1.00	37.10
ATOM C	937	CE1	PHE A 243	45.908	43.569	27.326	1.00	37.14
ATOM C	938	CE2	PHE A 243	45.959	45.744	26.299	1.00	37.25
ATOM C	939	CZ	PHE A 243	45.515	44.901	27.313	1.00	37.29
ATOM N	940	N	ARG A 244	45.395	41.543	23.887	1.00	40.11
ATOM C	941	CA	ARG A 244	44.653	40.375	24.354	1.00	40.93
ATOM C	942	C	ARG A 244	44.619	39.281	23.289	1.00	40.69
ATOM O	943	O	ARG A 244	44.502	38.099	23.609	1.00	41.20
ATOM C	944	CB	ARG A 244	43.229	40.773	24.760	1.00	41.45
ATOM C	945	CG	ARG A 244	43.188	41.719	25.952	1.00	42.10
ATOM C	946	CD	ARG A 244	41.766	42.050	26.382	1.00	43.32
ATOM N	947	NE	ARG A 244	41.749	43.039	27.456	1.00	44.43
ATOM C	948	CZ	ARG A 244	42.035	44.328	27.291	1.00	45.14

ATOM N	949	NH1	ARG	A	244	42.357	44.793	26.090	1.00	44.75
ATOM N	950	NH2	ARG	A	244	42.010	45.153	28.329	1.00	45.44
ATOM N	951	N	GLU	A	245	44.726	39.677	22.026	1.00	40.84
ATOM C	952	CA	GLU	A	245	44.732	38.718	20.928	1.00	40.87
ATOM C	953	C	GLU	A	245	46.147	38.501	20.393	1.00	40.07
ATOM O	954	O	GLU	A	245	46.537	37.374	20.083	1.00	39.45
ATOM C	955	CB	GLU	A	245	43.838	39.197	19.781	1.00	43.54
ATOM C	956	CG	GLU	A	245	42.334	39.160	20.061	1.00	47.70
ATOM C	957	CD	GLU	A	245	41.900	40.111	21.164	1.00	50.68
ATOM O	958	OE1	GLU	A	245	42.282	41.305	21.121	1.00	52.80
ATOM O	959	OE2	GLU	A	245	41.162	39.665	22.072	1.00	52.45
ATOM N	960	N	ARG	A	246	46.915	39.581	20.291	1.00	38.14
ATOM C	961	CA	ARG	A	246	48.277	39.501	19.764	1.00	36.50
ATOM C	962	C	ARG	A	246	49.259	38.743	20.660	1.00	36.05
ATOM O	963	O	ARG	A	246	50.051	37.943	20.170	1.00	36.35
ATOM C	964	CB	ARG	A	246	48.814	40.913	19.489	1.00	35.90
ATOM C	965	CG	ARG	A	246	50.130	40.945	18.713	1.00	35.45
ATOM C	966	CD	ARG	A	246	50.611	42.375	18.505	1.00	34.86
ATOM N	967	NE	ARG	A	246	49.743	43.147	17.619	1.00	34.95
ATOM C	968	CZ	ARG	A	246	49.766	43.077	16.291	1.00	34.35
ATOM N	969	NH1	ARG	A	246	50.616	42.267	15.676	1.00	35.15
ATOM N	970	NH2	ARG	A	246	48.939	43.827	15.574	1.00	35.50
ATOM N	971	N	VAL	A	247	49.212	38.986	21.967	1.00	35.97
ATOM C	972	CA	VAL	A	247	50.129	38.315	22.886	1.00	36.75
ATOM C	973	C	VAL	A	247	50.020	36.788	22.837	1.00	37.56
ATOM O	974	O	VAL	A	247	51.033	36.096	22.706	1.00	37.16
ATOM C	975	CB	VAL	A	247	49.927	38.806	24.340	1.00	36.31
ATOM C	976	CG1	VAL	A	247	50.775	37.987	25.296	1.00	35.75

TABLE 7

ATOM C	977	CG2	VAL A 247	50.314	40.282	24.444	1.00	36.50
ATOM N	978	N	PRO A 248	48.794	36.241	22.946	1.00	37.33
ATOM C	979	CA	PRO A 248	48.638	34.783	22.901	1.00	36.95
ATOM C	980	C	PRO A 248	49.231	34.184	21.629	1.00	36.36
ATOM O	981	O	PRO A 248	49.897	33.155	21.677	1.00	37.14
ATOM C	982	CB	PRO A 248	47.125	34.598	22.979	1.00	37.52
ATOM C	983	CG	PRO A 248	46.709	35.735	23.858	1.00	37.69
ATOM C	984	CD	PRO A 248	47.515	36.890	23.290	1.00	36.69
ATOM N	985	N	ALA A 249	48.997	34.840	20.497	1.00	35.60
ATOM C	986	CA	ALA A 249	49.507	34.367	19.217	1.00	35.36
ATOM C	987	C	ALA A 249	51.034	34.354	19.183	1.00	35.63
ATOM O	988	O	ALA A 249	51.646	33.411	18.669	1.00	33.65
ATOM C	989	CB	ALA A 249	48.968	35.236	18.090	1.00	36.03
ATOM N	990	N	LEU A 250	51.646	35.403	19.728	1.00	35.24
ATOM C	991	CA	LEU A 250	53.099	35.505	19.754	1.00	35.85
ATOM C	992	C	LEU A 250	53.701	34.458	20.681	1.00	36.48
ATOM O	993	O	LEU A 250	54.758	33.899	20.395	1.00	36.97
ATOM C	994	CB	LEU A 250	53.520	36.915	20.189	1.00	34.62
ATOM C	995	CG	LEU A 250	53.067	38.010	19.215	1.00	34.74
ATOM C	996	CD1	LEU A 250	53.473	39.384	19.731	1.00	34.92
ATOM C	997	CD2	LEU A 250	53.678	37.749	17.847	1.00	34.43
ATOM N	998	N	VAL A 251	53.025	34.191	21.790	1.00	38.25
ATOM C	999	CA	VAL A 251	53.501	33.193	22.738	1.00	40.28
ATOM C	1000	C	VAL A 251	53.471	31.810	22.087	1.00	41.33
ATOM O	1001	O	VAL A 251	54.447	31.062	22.159	1.00	41.27
ATOM C	1002	CB	VAL A 251	52.632	33.173	24.013	1.00	40.67
ATOM C	1003	CG1	VAL A 251	53.018	31.986	24.895	1.00	42.14
ATOM C	1004	CG2	VAL A 251	52.813	34.474	24.780	1.00	40.95



TABLE 7

ATOM N	1005	N	GLU A 252	52.355	31.480	21.439	1.00	41.97
ATOM C	1006	CA	GLU A 252	52.217	30.182	20.783	1.00	43.27
ATOM C	1007	C	GLU A 252	53.252	30.030	19.679	1.00	42.06
ATOM O	1008	O	GLU A 252	53.804	28.949	19.484	1.00	42.29
ATOM C	1009	CB	GLU A 252	50.822	30.019	20.172	1.00	45.54
ATOM C	1010	CG	GLU A 252	49.688	30.558	21.016	1.00	49.93
ATOM C	1011	CD	GLU A 252	49.586	29.929	22.392	1.00	52.52
ATOM O	1012	OE1	GLU A 252	48.789	30.449	23.201	1.00	54.25
ATOM O	1013	OE2	GLU A 252	50.280	28.924	22.670	1.00	55.02
ATOM N	1014	N	ALA A 253	53.503	31.116	18.953	1.00	40.26
ATOM C	1015	CA	ALA A 253	54.472	31.103	17.865	1.00	38.87
ATOM C	1016	C	ALA A 253	55.889	30.880	18.390	1.00	38.28
ATOM O	1017	O	ALA A 253	56.788	30.523	17.628	1.00	38.29
ATOM C	1018	CB	ALA A 253	54.398	32.406	17.082	1.00	39.08
ATOM N	1019	N	GLY A 254	56.088	31.103	19.686	1.00	37.14
ATOM C	1020	CA	GLY A 254	57.399	30.885	20.275	1.00	36.67
ATOM C	1021	C	GLY A 254	58.226	32.111	20.631	1.00	35.76
ATOM O	1022	O	GLY A 254	59.433	31.995	20.845	1.00	35.05
ATOM N	1023	N	ALA A 255	57.596	33.282	20.701	1.00	35.10
ATOM C	1024	CA	ALA A 255	58.321	34.502	21.045	1.00	34.05
ATOM C	1025	C	ALA A 255	59.011	34.342	22.399	1.00	33.03
ATOM O	1026	O	ALA A 255	58.402	33.902	23.372	1.00	32.76
ATOM C	1027	CB	ALA A 255	57.369	35.692	21.078	1.00	34.00
ATOM N	1028	N	ASP A 256	60.285	34.710	22.454	1.00	32.35
ATOM C	1029	CA	ASP A 256	61.061	34.601	23.682	1.00	32.05
ATOM C	1030	C	ASP A 256	60.886	35.807	24.597	1.00	31.18
ATOM O	1031	O	ASP A 256	61.004	35.699	25.817	1.00	30.47
ATOM C	1032	CB	ASP A 256	62.531	34.409	23.329	1.00	32.35

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ATOM C	1033	CG	ASP	A	256	62.770	33.118	22.575	1.00	34.08
ATOM O	1034	OD1	ASP	A	256	62.639	32.044	23.199	1.00	34.90
ATOM O	1035	OD2	ASP	A	256	63.068	33.172	21.365	1.00	33.17
ATOM N	1036	N	VAL	A	257	60.602	36.957	24.002	1.00	30.50
ATOM C	1037	CA	VAL	A	257	60.402	38.173	24.778	1.00	29.68
ATOM C	1038	C	VAL	A	257	59.555	39.139	23.961	1.00	29.30
ATOM O	1039	O	VAL	A	257	59.584	39.111	22.733	1.00	29.73
ATOM C	1040	CB	VAL	A	257	61.756	38.844	25.125	1.00	29.48
ATOM C	1041	CG1	VAL	A	257	62.462	39.273	23.848	1.00	29.83
ATOM C	1042	CG2	VAL	A	257	61.531	40.040	26.044	1.00	29.61
ATOM N	1043	N	LEU	A	258	58.800	39.982	24.654	1.00	28.19
ATOM C	1044	CA	LEU	A	258	57.942	40.961	24.007	1.00	28.90
ATOM C	1045	C	LEU	A	258	58.369	42.354	24.457	1.00	28.21
ATOM O	1046	O	LEU	A	258	59.113	42.503	25.419	1.00	28.37
ATOM C	1047	CB	LEU	A	258	56.485	40.746	24.425	1.00	27.71
ATOM C	1048	CG	LEU	A	258	55.915	39.332	24.289	1.00	28.73
ATOM C	1049	CD1	LEU	A	258	54.508	39.297	24.871	1.00	30.02
ATOM C	1050	CD2	LEU	A	258	55.907	38.917	22.833	1.00	29.49
ATOM N	1051	N	CYS	A	259	57.898	43.373	23.754	1.00	28.75
ATOM C	1052	CA	CYS	A	259	58.206	44.743	24.142	1.00	28.59
ATOM C	1053	C	CYS	A	259	57.122	45.669	23.617	1.00	28.15
ATOM O	1054	O	CYS	A	259	56.827	45.670	22.423	1.00	28.23
ATOM C	1055	CB	CYS	A	259	59.566	45.181	23.597	1.00	28.11
ATOM S	1056	SG	CYS	A	259	60.079	46.808	24.215	1.00	29.44
ATOM N	1057	N	ILE	A	260	56.525	46.443	24.518	1.00	28.54
ATOM C	1058	CA	ILE	A	260	55.490	47.392	24.132	1.00	29.64
ATOM C	1059	C	ILE	A	260	56.191	48.503	23.362	1.00	30.85
ATOM O	1060	O	ILE	A	260	57.144	49.106	23.852	1.00	30.69

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ATOM	1061	CB	ILE A 260	54.786	47.985	25.361	1.00	29.60
C								
ATOM	1062	CG1	ILE A 260	54.254	46.849	26.238	1.00	29.82
C								
ATOM	1063	CG2	ILE A 260	53.638	48.901	24.916	1.00	29.89
C								
ATOM	1064	CD1	ILE A 260	53.659	47.309	27.557	1.00	30.44
C								
ATOM	1065	N	ASP A 261	55.702	48.760	22.156	1.00	31.00
N								
ATOM	1066	CA	ASP A 261	56.266	49.756	21.257	1.00	32.38
C								
ATOM	1067	C	ASP A 261	55.498	51.081	21.316	1.00	32.90
C								
ATOM	1068	O	ASP A 261	54.361	51.162	20.859	1.00	32.73
O								
ATOM	1069	CB	ASP A 261	56.252	49.151	19.846	1.00	33.58
C								
ATOM	1070	CG	ASP A 261	56.773	50.088	18.783	1.00	35.13
C								
ATOM	1071	OD1	ASP A 261	57.544	51.012	19.104	1.00	35.01
O								
ATOM	1072	OD2	ASP A 261	56.415	49.874	17.604	1.00	35.63
O								
ATOM	1073	N	SER A 262	56.121	52.112	21.888	1.00	32.69
N								
ATOM	1074	CA	SER A 262	55.483	53.427	22.013	1.00	32.90
C								
ATOM	1075	C	SER A 262	56.502	54.557	22.175	1.00	32.98
C								
ATOM	1076	O	SER A 262	57.598	54.339	22.686	1.00	32.40
O								
ATOM	1077	CB	SER A 262	54.529	53.423	23.213	1.00	33.69
C								
ATOM	1078	OG	SER A 262	54.010	54.716	23.469	1.00	35.09
O								
ATOM	1079	N	SER A 263	56.142	55.766	21.745	1.00	32.80
N								
ATOM	1080	CA	SER A 263	57.048	56.906	21.872	1.00	33.15
C								
ATOM	1081	C	SER A 263	56.985	57.508	23.276	1.00	33.32
C								
ATOM	1082	O	SER A 263	57.932	58.151	23.722	1.00	35.72
O								
ATOM	1083	CB	SER A 263	56.734	57.976	20.816	1.00	34.60
C								
ATOM	1084	OG	SER A 263	55.370	58.352	20.845	1.00	37.69
O								
ATOM	1085	N	ASP A 264	55.871	57.296	23.971	1.00	31.32
N								
ATOM	1086	CA	ASP A 264	55.711	57.795	25.337	1.00	29.82
C								
ATOM	1087	C	ASP A 264	55.158	56.664	26.203	1.00	29.45
C								
ATOM	1088	O	ASP A 264	53.942	56.475	26.304	1.00	28.91
O								

TABLE 7

ATOM C	1089	CB	ASP A 264	54.775	59.017	25.356	1.00	28.89
ATOM C	1090	CG	ASP A 264	54.352	59.436	26.769	1.00	29.68
ATOM O	1091	OD1	ASP A 264	55.007	59.067	27.768	1.00	26.79
ATOM O	1092	OD2	ASP A 264	53.348	60.168	26.877	1.00	29.53
ATOM N	1093	N	GLY A 265	56.071	55.914	26.815	1.00	27.82
ATOM C	1094	CA	GLY A 265	55.692	54.796	27.662	1.00	27.73
ATOM C	1095	C	GLY A 265	55.189	55.151	29.048	1.00	27.21
ATOM O	1096	O	GLY A 265	54.751	54.269	29.784	1.00	27.06
ATOM N	1097	N	PHE A 266	55.244	56.430	29.412	1.00	26.33
ATOM C	1098	CA	PHE A 266	54.779	56.870	30.726	1.00	26.29
ATOM C	1099	C	PHE A 266	53.265	56.989	30.574	1.00	27.35
ATOM O	1100	O	PHE A 266	52.707	58.086	30.516	1.00	26.16
ATOM C	1101	CB	PHE A 266	55.403	58.222	31.071	1.00	26.18
ATOM C	1102	CG	PHE A 266	55.499	58.503	32.553	1.00	27.83
ATOM C	1103	CD1	PHE A 266	54.770	57.754	33.481	1.00	26.01
ATOM C	1104	CD2	PHE A 266	56.305	59.541	33.017	1.00	26.81
ATOM C	1105	CE1	PHE A 266	54.846	58.040	34.843	1.00	27.31
ATOM C	1106	CE2	PHE A 266	56.385	59.833	34.373	1.00	27.03
ATOM C	1107	CZ	PHE A 266	55.654	59.081	35.291	1.00	27.65
ATOM N	1108	N	SER A 267	52.613	55.832	30.502	1.00	28.62
ATOM C	1109	CA	SER A 267	51.176	55.751	30.282	1.00	29.12
ATOM C	1110	C	SER A 267	50.490	54.634	31.061	1.00	29.52
ATOM O	1111	O	SER A 267	51.036	53.543	31.231	1.00	27.59
ATOM C	1112	CB	SER A 267	50.924	55.535	28.790	1.00	30.27
ATOM O	1113	OG	SER A 267	49.593	55.132	28.534	1.00	33.40
ATOM N	1114	N	GLU A 268	49.272	54.912	31.507	1.00	30.01
ATOM C	1115	CA	GLU A 268	48.493	53.936	32.246	1.00	31.53
ATOM C	1116	C	GLU A 268	48.208	52.753	31.328	1.00	31.63

ATOM	1117	O	GLU A 268	48.000	51.627	31.790	1.00	31.90
O								
ATOM	1118	CB	GLU A 268	47.184	54.572	32.716	1.00	33.65
C								
ATOM	1119	CG	GLU A 268	46.385	53.720	33.684	1.00	36.92
C								
ATOM	1120	CD	GLU A 268	45.169	54.445	34.238	1.00	38.90
C								
ATOM	1121	OE1	GLU A 268	44.448	53.837	35.059	1.00	41.93
O								
ATOM	1122	OE2	GLU A 268	44.933	55.615	33.857	1.00	37.65
O								
ATOM	1123	N	TRP A 269	48.212	53.007	30.022	1.00	30.66
N								
ATOM	1124	CA	TRP A 269	47.960	51.950	29.053	1.00	32.73
C								
ATOM	1125	C	TRP A 269	49.023	50.858	29.122	1.00	31.60
C								
ATOM	1126	O	TRP A 269	48.717	49.678	28.951	1.00	32.00
O								
ATOM	1127	CB	TRP A 269	47.890	52.520	27.632	1.00	34.13
C								
ATOM	1128	CG	TRP A 269	46.705	53.411	27.401	1.00	38.84
C								
ATOM	1129	CD1	TRP A 269	46.723	54.759	27.170	1.00	39.63
C								
ATOM	1130	CD2	TRP A 269	45.325	53.021	27.383	1.00	40.48
C								
ATOM	1131	NE1	TRP A 269	45.442	55.229	27.009	1.00	40.70
N								
ATOM	1132	CE2	TRP A 269	44.565	54.185	27.134	1.00	40.74
C								
ATOM	1133	CE3	TRP A 269	44.657	51.800	27.553	1.00	41.39
C								
ATOM	1134	CZ2	TRP A 269	43.168	54.165	27.049	1.00	42.44
C								
ATOM	1135	CZ3	TRP A 269	43.266	51.780	27.469	1.00	42.63
C								
ATOM	1136	CH2	TRP A 269	42.539	52.957	27.219	1.00	42.95
C								
ATOM	1137	N	GLN A 270	50.273	51.237	29.370	1.00	30.36
N								
ATOM	1138	CA	GLN A 270	51.330	50.232	29.463	1.00	29.91
C								
ATOM	1139	C	GLN A 270	51.197	49.444	30.764	1.00	29.40
C								
ATOM	1140	O	GLN A 270	51.478	48.250	30.802	1.00	29.26
O								
ATOM	1141	CB	GLN A 270	52.717	50.883	29.369	1.00	28.96
C								
ATOM	1142	CG	GLN A 270	52.925	51.642	28.065	1.00	28.77
C								
ATOM	1143	CD	GLN A 270	54.293	51.420	27.438	1.00	28.29
C								
ATOM	1144	OE1	GLN A 270	55.185	50.820	28.041	1.00	27.12
O								

TABLE 7

ATOM N	1145	NE2	GLN A 270	54.463	51.916	26.217	1.00	26.63
ATOM N	1146	N	LYS A 271	50.763	50.113	31.828	1.00	30.02
ATOM C	1147	CA	LYS A 271	50.579	49.437	33.107	1.00	31.43
ATOM C	1148	C	LYS A 271	49.484	48.381	32.944	1.00	31.09
ATOM O	1149	O	LYS A 271	49.618	47.257	33.419	1.00	30.76
ATOM C	1150	CB	LYS A 271	50.181	50.433	34.202	1.00	33.38
ATOM C	1151	CG	LYS A 271	49.911	49.770	35.552	1.00	36.04
ATOM C	1152	CD	LYS A 271	49.607	50.779	36.655	1.00	37.85
ATOM C	1153	CE	LYS A 271	49.404	50.068	37.993	1.00	40.25
ATOM N	1154	NZ	LYS A 271	49.157	51.008	39.131	1.00	42.83
ATOM N	1155	N	ILE A 272	48.409	48.752	32.257	1.00	31.55
ATOM C	1156	CA	ILE A 272	47.291	47.841	32.018	1.00	31.85
ATOM C	1157	C	ILE A 272	47.745	46.632	31.202	1.00	31.95
ATOM O	1158	O	ILE A 272	47.433	45.490	31.544	1.00	31.04
ATOM C	1159	CB	ILE A 272	46.139	48.565	31.278	1.00	31.97
ATOM C	1160	CG1	ILE A 272	45.463	49.551	32.235	1.00	32.25
ATOM C	1161	CG2	ILE A 272	45.137	47.552	30.730	1.00	32.38
ATOM C	1162	CD1	ILE A 272	44.456	50.473	31.570	1.00	32.51
ATOM N	1163	N	THR A 273	48.492	46.890	30.133	1.00	30.63
ATOM C	1164	CA	THR A 273	48.995	45.833	29.267	1.00	31.00
ATOM C	1165	C	THR A 273	49.882	44.849	30.030	1.00	31.56
ATOM O	1166	O	THR A 273	49.702	43.633	29.927	1.00	31.43
ATOM C	1167	CB	THR A 273	49.796	46.422	28.084	1.00	30.85
ATOM O	1168	OG1	THR A 273	48.932	47.244	27.292	1.00	32.26
ATOM C	1169	CG2	THR A 273	50.366	45.311	27.208	1.00	30.97
ATOM N	1170	N	ILE A 274	50.843	45.370	30.789	1.00	31.51
ATOM C	1171	CA	ILE A 274	51.736	44.506	31.558	1.00	32.20
ATOM C	1172	C	ILE A 274	50.927	43.738	32.603	1.00	32.56

ATOM O	1173	O	ILE A 274	51.189	42.566	32.870	1.00	32.30
ATOM C	1174	CB	ILE A 274	52.825	45.314	32.288	1.00	31.42
ATOM C	1175	CG1	ILE A 274	53.653	46.114	31.278	1.00	32.15
ATOM C	1176	CG2	ILE A 274	53.718	44.367	33.091	1.00	31.67
ATOM C	1177	CD1	ILE A 274	54.655	47.065	31.920	1.00	32.30
ATOM N	1178	N	GLY A 275	49.941	44.410	33.189	1.00	32.77
ATOM C	1179	CA	GLY A 275	49.110	43.775	34.196	1.00	33.56
ATOM C	1180	C	GLY A 275	48.351	42.578	33.653	1.00	34.04
ATOM O	1181	O	GLY A 275	48.245	41.546	34.320	1.00	34.05
ATOM N	1182	N	TRP A 276	47.822	42.714	32.443	1.00	33.68
ATOM C	1183	CA	TRP A 276	47.065	41.642	31.804	1.00	34.90
ATOM C	1184	C	TRP A 276	47.980	40.451	31.536	1.00	35.94
ATOM O	1185	O	TRP A 276	47.581	39.293	31.700	1.00	34.92
ATOM C	1186	CB	TRP A 276	46.469	42.134	30.485	1.00	35.21
ATOM C	1187	CG	TRP A 276	45.582	41.138	29.813	1.00	36.07
ATOM C	1188	CD1	TRP A 276	44.237	40.972	30.002	1.00	36.67
ATOM C	1189	CD2	TRP A 276	45.978	40.153	28.853	1.00	36.84
ATOM N	1190	NE1	TRP A 276	43.772	39.944	29.212	1.00	36.48
ATOM C	1191	CE2	TRP A 276	44.820	39.424	28.498	1.00	37.06
ATOM C	1192	CE3	TRP A 276	47.201	39.814	28.255	1.00	36.59
ATOM C	1193	CZ2	TRP A 276	44.848	38.376	27.572	1.00	37.28
ATOM C	1194	CZ3	TRP A 276	47.230	38.772	27.336	1.00	37.26
ATOM C	1195	CH2	TRP A 276	46.057	38.065	27.004	1.00	37.96
ATOM N	1196	N	ILE A 277	49.211	40.740	31.121	1.00	35.54
ATOM C	1197	CA	ILE A 277	50.181	39.690	30.835	1.00	36.20
ATOM C	1198	C	ILE A 277	50.562	38.933	32.109	1.00	37.31
ATOM O	1199	O	ILE A 277	50.646	37.703	32.106	1.00	37.04
ATOM C	1200	CB	ILE A 277	51.456	40.279	30.178	1.00	35.46

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ATOM C	1201	CG1	ILE	A	277	51.112	40.828	28.791	1.00	35.23
ATOM C	1202	CG2	ILE	A	277	52.541	39.210	30.080	1.00	35.59
ATOM C	1203	CD1	ILE	A	277	52.273	41.503	28.081	1.00	35.42
ATOM N	1204	N	ARG	A	278	50.787	39.666	33.194	1.00	38.07
ATOM C	1205	CA	ARG	A	278	51.152	39.047	34.466	1.00	39.93
ATOM C	1206	C	ARG	A	278	50.029	38.167	35.005	1.00	41.35
ATOM O	1207	O	ARG	A	278	50.273	37.077	35.517	1.00	41.11
ATOM C	1208	CB	ARG	A	278	51.489	40.120	35.502	1.00	39.44
ATOM C	1209	CG	ARG	A	278	52.797	40.835	35.243	1.00	38.20
ATOM C	1210	CD	ARG	A	278	53.989	39.927	35.511	1.00	38.69
ATOM N	1211	NE	ARG	A	278	55.225	40.567	35.075	1.00	37.38
ATOM C	1212	CZ	ARG	A	278	55.937	40.181	34.023	1.00	37.01
ATOM N	1213	NH1	ARG	A	278	55.547	39.141	33.297	1.00	35.28
ATOM N	1214	NH2	ARG	A	278	57.022	40.861	33.674	1.00	34.80
ATOM N	1215	N	GLU	A	279	48.801	38.654	34.891	1.00	42.82
ATOM C	1216	CA	GLU	A	279	47.634	37.922	35.369	1.00	45.18
ATOM C	1217	C	GLU	A	279	47.353	36.655	34.559	1.00	45.03
ATOM O	1218	O	GLU	A	279	46.793	35.686	35.076	1.00	45.43
ATOM C	1219	CB	GLU	A	279	46.417	38.858	35.355	1.00	47.47
ATOM C	1220	CG	GLU	A	279	45.058	38.180	35.269	1.00	51.44
ATOM C	1221	CD	GLU	A	279	44.757	37.662	33.873	1.00	53.84
ATOM O	1222	OE1	GLU	A	279	44.818	38.465	32.909	1.00	54.89
ATOM O	1223	OE2	GLU	A	279	44.460	36.454	33.740	1.00	54.90
ATOM N	1224	N	LYS	A	280	47.755	36.655	33.294	1.00	44.19
ATOM C	1225	CA	LYS	A	280	47.513	35.515	32.421	1.00	43.85
ATOM C	1226	C	LYS	A	280	48.704	34.558	32.319	1.00	43.09
ATOM O	1227	O	LYS	A	280	48.523	33.356	32.109	1.00	42.03
ATOM C	1228	CB	LYS	A	280	47.133	36.030	31.027	1.00	45.44



TABLE 7

ATOM C	1229	CG	LYS A 280	46.346	35.059	30.153	1.00	48.33
ATOM C	1230	CD	LYS A 280	47.213	33.959	29.575	1.00	50.41
ATOM C	1231	CE	LYS A 280	46.394	33.011	28.702	1.00	51.95
ATOM N	1232	NZ	LYS A 280	45.734	33.714	27.563	1.00	52.39
ATOM N	1233	N	TYR A 281	49.915	35.082	32.494	1.00	41.24
ATOM C	1234	CA	TYR A 281	51.121	34.268	32.369	1.00	39.92
ATOM C	1235	C	TYR A 281	52.095	34.338	33.535	1.00	39.29
ATOM O	1236	O	TYR A 281	53.103	33.636	33.538	1.00	38.90
ATOM C	1237	CB	TYR A 281	51.882	34.674	31.110	1.00	40.32
ATOM C	1238	CG	TYR A 281	51.108	34.542	29.823	1.00	40.12
ATOM C	1239	CD1	TYR A 281	50.920	33.296	29.224	1.00	40.31
ATOM C	1240	CD2	TYR A 281	50.595	35.668	29.181	1.00	40.13
ATOM C	1241	CE1	TYR A 281	50.246	33.178	28.013	1.00	40.79
ATOM C	1242	CE2	TYR A 281	49.918	35.560	27.973	1.00	40.17
ATOM C	1243	CZ	TYR A 281	49.750	34.314	27.393	1.00	41.11
ATOM O	1244	OH	TYR A 281	49.097	34.208	26.188	1.00	41.85
ATOM N	1245	N	GLY A 282	51.812	35.181	34.517	1.00	38.90
ATOM C	1246	CA	GLY A 282	52.733	35.306	35.629	1.00	39.41
ATOM C	1247	C	GLY A 282	54.044	35.871	35.105	1.00	40.43
ATOM O	1248	O	GLY A 282	54.044	36.689	34.184	1.00	39.10
ATOM N	1249	N	ASP A 283	55.163	35.432	35.671	1.00	40.95
ATOM C	1250	CA	ASP A 283	56.466	35.918	35.236	1.00	42.89
ATOM C	1251	C	ASP A 283	57.110	35.037	34.163	1.00	42.30
ATOM O	1252	O	ASP A 283	58.304	35.149	33.903	1.00	43.50
ATOM C	1253	CB	ASP A 283	57.407	36.046	36.440	1.00	44.35
ATOM C	1254	CG	ASP A 283	56.985	37.154	37.400	1.00	47.46
ATOM O	1255	OD1	ASP A 283	57.019	38.341	37.000	1.00	47.96
ATOM O	1256	OD2	ASP A 283	56.620	36.840	38.555	1.00	48.36

TABLE 7

ATOM N	1257	N	LYS A 284	56.321	34.171	33.534	1.00	42.27
ATOM C	1258	CA	LYS A 284	56.843	33.283	32.494	1.00	41.83
ATOM C	1259	C	LYS A 284	56.953	33.968	31.134	1.00	40.43
ATOM O	1260	O	LYS A 284	57.689	33.518	30.256	1.00	40.67
ATOM C	1261	CB	LYS A 284	55.970	32.029	32.360	1.00	44.31
ATOM C	1262	CG	LYS A 284	56.142	31.005	33.480	1.00	47.22
ATOM C	1263	CD	LYS A 284	55.534	31.467	34.794	1.00	49.17
ATOM C	1264	CE	LYS A 284	55.602	30.352	35.837	1.00	51.28
ATOM N	1265	NZ	LYS A 284	54.892	30.695	37.108	1.00	52.23
ATOM N	1266	N	VAL A 285	56.204	35.045	30.950	1.00	37.55
ATOM C	1267	CA	VAL A 285	56.257	35.784	29.696	1.00	34.84
ATOM C	1268	C	VAL A 285	56.954	37.100	30.007	1.00	32.72
ATOM O	1269	O	VAL A 285	56.514	37.847	30.876	1.00	32.13
ATOM C	1270	CB	VAL A 285	54.846	36.045	29.142	1.00	34.53
ATOM C	1271	CG1	VAL A 285	54.912	37.015	27.967	1.00	34.19
ATOM C	1272	CG2	VAL A 285	54.224	34.722	28.698	1.00	35.84
ATOM N	1273	N	LYS A 286	58.053	37.364	29.307	1.00	31.33
ATOM C	1274	CA	LYS A 286	58.836	38.575	29.529	1.00	29.68
ATOM C	1275	C	LYS A 286	58.365	39.710	28.629	1.00	28.86
ATOM O	1276	O	LYS A 286	58.122	39.509	27.442	1.00	29.10
ATOM C	1277	CB	LYS A 286	60.318	38.281	29.276	1.00	30.15
ATOM C	1278	CG	LYS A 286	60.847	37.084	30.062	1.00	29.04
ATOM C	1279	CD	LYS A 286	60.622	37.263	31.558	1.00	28.26
ATOM C	1280	CE	LYS A 286	61.158	36.077	32.355	1.00	29.94
ATOM N	1281	NZ	LYS A 286	60.950	36.259	33.822	1.00	28.63
ATOM N	1282	N	VAL A 287	58.254	40.907	29.195	1.00	28.83
ATOM C	1283	CA	VAL A 287	57.786	42.050	28.427	1.00	28.30
ATOM C	1284	C	VAL A 287	58.482	43.361	28.793	1.00	27.68

ATOM	1285	O	VAL A 287	58.459	43.792	29.942	1.00	28.41
O								
ATOM	1286	CB	VAL A 287	56.242	42.211	28.584	1.00	27.98
C								
ATOM	1287	CG1	VAL A 287	55.874	42.312	30.049	1.00	29.20
C								
ATOM	1288	CG2	VAL A 287	55.754	43.436	27.827	1.00	28.74
C								
ATOM	1289	N	GLY A 288	59.121	43.974	27.803	1.00	28.04
N								
ATOM	1290	CA	GLY A 288	59.786	45.246	28.025	1.00	26.66
C								
ATOM	1291	C	GLY A 288	58.762	46.345	27.815	1.00	26.11
C								
ATOM	1292	O	GLY A 288	57.721	46.105	27.203	1.00	25.68
O								
ATOM	1293	N	ALA A 289	59.044	47.541	28.323	1.00	25.08
N								
ATOM	1294	CA	ALA A 289	58.126	48.669	28.192	1.00	24.74
C								
ATOM	1295	C	ALA A 289	58.906	49.955	27.935	1.00	25.55
C								
ATOM	1296	O	ALA A 289	60.115	50.007	28.151	1.00	26.30
O								
ATOM	1297	CB	ALA A 289	57.288	48.813	29.460	1.00	22.88
C								
ATOM	1298	N	GLY A 290	58.207	50.990	27.478	1.00	26.17
N								
ATOM	1299	CA	GLY A 290	58.857	52.259	27.196	1.00	25.73
C								
ATOM	1300	C	GLY A 290	58.137	52.974	26.069	1.00	26.32
C								
ATOM	1301	O	GLY A 290	57.099	52.500	25.616	1.00	27.48
O								
ATOM	1302	N	ASN A 291	58.677	54.095	25.592	1.00	25.49
N								
ATOM	1303	CA	ASN A 291	59.932	54.659	26.086	1.00	24.28
C								
ATOM	1304	C	ASN A 291	59.744	55.754	27.124	1.00	23.86
C								
ATOM	1305	O	ASN A 291	58.738	56.465	27.115	1.00	22.00
O								
ATOM	1306	CB	ASN A 291	60.729	55.245	24.919	1.00	24.80
C								
ATOM	1307	CG	ASN A 291	61.287	54.184	24.008	1.00	25.31
C								
ATOM	1308	OD1	ASN A 291	60.830	53.042	24.021	1.00	25.35
O								
ATOM	1309	ND2	ASN A 291	62.278	54.555	23.202	1.00	24.45
N								
ATOM	1310	N	ILE A 292	60.729	55.883	28.011	1.00	22.96
N								
ATOM	1311	CA	ILE A 292	60.724	56.925	29.030	1.00	22.95
C								
ATOM	1312	C	ILE A 292	62.077	57.636	28.986	1.00	23.91
C								

TABLE 7

ATOM O	1313	O	ILE A 292	63.017	57.157	28.342	1.00	23.07
ATOM C	1314	CB	ILE A 292	60.426	56.356	30.455	1.00	23.66
ATOM C	1315	CG1	ILE A 292	61.301	55.139	30.770	1.00	22.82
ATOM C	1316	CG2	ILE A 292	58.958	55.963	30.542	1.00	24.06
ATOM C	1317	CD1	ILE A 292	62.734	55.478	31.158	1.00	23.86
ATOM N	1318	N	VAL A 293	62.181	58.791	29.633	1.00	24.59
ATOM C	1319	CA	VAL A 293	63.440	59.524	29.605	1.00	25.09
ATOM C	1320	C	VAL A 293	63.902	60.057	30.944	1.00	25.38
ATOM O	1321	O	VAL A 293	64.874	60.812	31.000	1.00	24.51
ATOM C	1322	CB	VAL A 293	63.380	60.708	28.623	1.00	24.93
ATOM C	1323	CG1	VAL A 293	63.283	60.192	27.196	1.00	24.14
ATOM C	1324	CG2	VAL A 293	62.200	61.601	28.965	1.00	25.29
ATOM N	1325	N	ASP A 294	63.209	59.686	32.018	1.00	25.36
ATOM C	1326	CA	ASP A 294	63.610	60.140	33.342	1.00	25.43
ATOM C	1327	C	ASP A 294	63.315	59.123	34.439	1.00	25.22
ATOM O	1328	O	ASP A 294	62.705	58.082	34.188	1.00	24.53
ATOM C	1329	CB	ASP A 294	62.966	61.500	33.678	1.00	26.32
ATOM C	1330	CG	ASP A 294	61.456	61.424	33.890	1.00	26.90
ATOM O	1331	OD1	ASP A 294	60.831	60.369	33.659	1.00	27.35
ATOM O	1332	OD2	ASP A 294	60.884	62.456	34.291	1.00	28.46
ATOM N	1333	N	GLY A 295	63.762	59.435	35.649	1.00	25.01
ATOM C	1334	CA	GLY A 295	63.561	58.540	36.774	1.00	26.69
ATOM C	1335	C	GLY A 295	62.112	58.224	37.083	1.00	26.45
ATOM O	1336	O	GLY A 295	61.778	57.086	37.408	1.00	25.94
ATOM N	1337	N	GLU A 296	61.243	59.225	36.991	1.00	27.48
ATOM C	1338	CA	GLU A 296	59.825	59.013	37.275	1.00	27.87
ATOM C	1339	C	GLU A 296	59.191	58.014	36.317	1.00	27.05
ATOM O	1340	O	GLU A 296	58.438	57.136	36.736	1.00	26.56

TABLE 7

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ATOM	1341	CB	GLU A 296	59.066	60.340	37.211	1.00	31.37
C								
ATOM	1342	CG	GLU A 296	59.445	61.302	38.318	1.00	37.66
C								
ATOM	1343	CD	GLU A 296	58.542	62.513	38.368	1.00	42.29
C								
ATOM	1344	OE1	GLU A 296	57.320	62.336	38.576	1.00	45.55
O								
ATOM	1345	OE2	GLU A 296	59.050	63.643	38.196	1.00	45.27
O								
ATOM	1346	N	GLY A 297	59.492	58.155	35.030	1.00	25.33
N								
ATOM	1347	CA	GLY A 297	58.939	57.249	34.042	1.00	25.17
C								
ATOM	1348	C	GLY A 297	59.456	55.839	34.273	1.00	25.62
C								
ATOM	1349	O	GLY A 297	58.719	54.863	34.137	1.00	24.83
O								
ATOM	1350	N	PHE A 298	60.737	55.734	34.610	1.00	24.52
N								
ATOM	1351	CA	PHE A 298	61.343	54.434	34.880	1.00	25.70
C								
ATOM	1352	C	PHE A 298	60.631	53.751	36.043	1.00	26.22
C								
ATOM	1353	O	PHE A 298	60.219	52.595	35.946	1.00	26.55
O								
ATOM	1354	CB	PHE A 298	62.821	54.589	35.253	1.00	24.99
C								
ATOM	1355	CG	PHE A 298	63.432	53.322	35.785	1.00	24.97
C								
ATOM	1356	CD1	PHE A 298	63.935	52.358	34.917	1.00	25.29
C								
ATOM	1357	CD2	PHE A 298	63.410	53.047	37.150	1.00	25.62
C								
ATOM	1358	CE1	PHE A 298	64.400	51.131	35.400	1.00	25.51
C								
ATOM	1359	CE2	PHE A 298	63.871	51.822	37.645	1.00	25.63
C								
ATOM	1360	CZ	PHE A 298	64.364	50.863	36.766	1.00	23.87
C								
ATOM	1361	N	ARG A 299	60.504	54.478	37.149	1.00	26.18
N								
ATOM	1362	CA	ARG A 299	59.875	53.947	38.354	1.00	27.35
C								
ATOM	1363	C	ARG A 299	58.440	53.489	38.104	1.00	27.07
C								
ATOM	1364	O	ARG A 299	58.011	52.454	38.622	1.00	26.36
O								
ATOM	1365	CB	ARG A 299	59.916	55.000	39.468	1.00	28.99
C								
ATOM	1366	CG	ARG A 299	59.457	54.503	40.837	1.00	32.84
C								
ATOM	1367	CD	ARG A 299	59.794	55.518	41.926	1.00	35.60
C								
ATOM	1368	NE	ARG A 299	61.220	55.543	42.252	1.00	37.71
N								

TABLE 7

ATOM	1369	CZ	ARG A 299	61.834	54.631	43.006	1.00	38.54
C								
ATOM	1370	NH1	ARG A 299	61.150	53.616	43.519	1.00	37.82
N								
ATOM	1371	NH2	ARG A 299	63.133	54.738	43.258	1.00	38.76
N								
ATOM	1372	N	TYR A 300	57.702	54.249	37.303	1.00	25.60
N								
ATOM	1373	CA	TYR A 300	56.324	53.890	37.005	1.00	25.92
C								
ATOM	1374	C	TYR A 300	56.249	52.543	36.286	1.00	26.46
C								
ATOM	1375	O	TYR A 300	55.431	51.690	36.634	1.00	26.22
O								
ATOM	1376	CB	TYR A 300	55.664	54.958	36.136	1.00	26.45
C								
ATOM	1377	CG	TYR A 300	54.209	54.667	35.845	1.00	26.38
C								
ATOM	1378	CD1	TYR A 300	53.222	54.911	36.803	1.00	27.42
C								
ATOM	1379	CD2	TYR A 300	53.822	54.123	34.623	1.00	26.65
C								
ATOM	1380	CE1	TYR A 300	51.881	54.621	36.546	1.00	27.66
C								
ATOM	1381	CE2	TYR A 300	52.486	53.831	34.359	1.00	26.96
C								
ATOM	1382	CZ	TYR A 300	51.525	54.083	35.321	1.00	27.35
C								
ATOM	1383	OH	TYR A 300	50.207	53.804	35.045	1.00	28.84
O								
ATOM	1384	N	LEU A 301	57.100	52.352	35.283	1.00	24.93
N								
ATOM	1385	CA	LEU A 301	57.097	51.101	34.539	1.00	25.20
C								
ATOM	1386	C	LEU A 301	57.727	49.962	35.343	1.00	24.99
C								
ATOM	1387	O	LEU A 301	57.383	48.795	35.152	1.00	25.51
O								
ATOM	1388	CB	LEU A 301	57.814	51.281	33.192	1.00	24.73
C								
ATOM	1389	CG	LEU A 301	57.092	52.216	32.208	1.00	24.97
C								
ATOM	1390	CD1	LEU A 301	57.901	52.348	30.920	1.00	24.19
C								
ATOM	1391	CD2	LEU A 301	55.693	51.665	31.903	1.00	25.94
C								
ATOM	1392	N	ALA A 302	58.642	50.300	36.243	1.00	25.01
N								
ATOM	1393	CA	ALA A 302	59.284	49.289	37.077	1.00	26.34
C								
ATOM	1394	C	ALA A 302	58.224	48.715	38.022	1.00	27.09
C								
ATOM	1395	O	ALA A 302	58.068	47.495	38.140	1.00	27.29
O								
ATOM	1396	CB	ALA A 302	60.426	49.911	37.872	1.00	25.08
C								

TABLE 7

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ATOM N	1397	N	ASP A 303	57.493	49.603	38.688	1.00	27.62
ATOM C	1398	CA	ASP A 303	56.439	49.182	39.602	1.00	29.54
ATOM C	1399	C	ASP A 303	55.335	48.444	38.853	1.00	29.82
ATOM O	1400	O	ASP A 303	54.670	47.574	39.423	1.00	29.45
ATOM C	1401	CB	ASP A 303	55.846	50.386	40.342	1.00	31.26
ATOM C	1402	CG	ASP A 303	56.796	50.967	41.374	1.00	34.06
ATOM O	1403	OD1	ASP A 303	57.678	50.226	41.863	1.00	35.03
ATOM O	1404	OD2	ASP A 303	56.652	52.160	41.713	1.00	35.59
ATOM N	1405	N	ALA A 304	55.145	48.786	37.579	1.00	28.20
ATOM C	1406	CA	ALA A 304	54.124	48.148	36.748	1.00	28.48
ATOM C	1407	C	ALA A 304	54.500	46.706	36.403	1.00	29.41
ATOM O	1408	O	ALA A 304	53.644	45.919	35.981	1.00	30.01
ATOM C	1409	CB	ALA A 304	53.913	48.943	35.467	1.00	29.13
ATOM N	1410	N	GLY A 305	55.779	46.371	36.558	1.00	27.94
ATOM C	1411	CA	GLY A 305	56.228	45.013	36.285	1.00	28.09
ATOM C	1412	C	GLY A 305	57.047	44.759	35.031	1.00	27.94
ATOM O	1413	O	GLY A 305	57.303	43.603	34.688	1.00	28.94
ATOM N	1414	N	ALA A 306	57.468	45.815	34.342	1.00	27.01
ATOM C	1415	CA	ALA A 306	58.259	45.655	33.118	1.00	26.21
ATOM C	1416	C	ALA A 306	59.530	44.833	33.371	1.00	25.71
ATOM O	1417	O	ALA A 306	60.172	44.983	34.409	1.00	26.47
ATOM C	1418	CB	ALA A 306	58.630	47.038	32.549	1.00	26.19
ATOM N	1419	N	ASP A 307	59.888	43.970	32.421	1.00	26.45
ATOM C	1420	CA	ASP A 307	61.087	43.135	32.549	1.00	26.38
ATOM C	1421	C	ASP A 307	62.351	43.883	32.137	1.00	26.11
ATOM O	1422	O	ASP A 307	63.459	43.517	32.523	1.00	26.90
ATOM C	1423	CB	ASP A 307	60.923	41.857	31.731	1.00	27.11
ATOM C	1424	CG	ASP A 307	59.967	40.887	32.387	1.00	29.35

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ATOM O	1425	OD1	ASP	A	307	60.312	40.373	33.470	1.00	29.58
ATOM O	1426	OD2	ASP	A	307	58.873	40.656	31.837	1.00	30.28
ATOM N	1427	N	PHE	A	308	62.174	44.916	31.324	1.00	24.79
ATOM C	1428	CA	PHE	A	308	63.274	45.786	30.922	1.00	25.02
ATOM C	1429	C	PHE	A	308	62.613	47.071	30.453	1.00	25.26
ATOM O	1430	O	PHE	A	308	61.465	47.059	30.006	1.00	25.39
ATOM C	1431	CB	PHE	A	308	64.194	45.142	29.855	1.00	24.16
ATOM C	1432	CG	PHE	A	308	63.647	45.131	28.449	1.00	26.91
ATOM C	1433	CD1	PHE	A	308	63.601	46.297	27.686	1.00	26.51
ATOM C	1434	CD2	PHE	A	308	63.232	43.933	27.866	1.00	27.59
ATOM C	1435	CE1	PHE	A	308	63.157	46.273	26.368	1.00	27.45
ATOM C	1436	CE2	PHE	A	308	62.783	43.892	26.543	1.00	28.40
ATOM C	1437	CZ	PHE	A	308	62.745	45.062	25.790	1.00	28.01
ATOM N	1438	N	ILE	A	309	63.316	48.187	30.597	1.00	24.66
ATOM C	1439	CA	ILE	A	309	62.737	49.469	30.227	1.00	24.56
ATOM C	1440	C	ILE	A	309	63.565	50.185	29.171	1.00	24.22
ATOM O	1441	O	ILE	A	309	64.781	50.319	29.304	1.00	23.11
ATOM C	1442	CB	ILE	A	309	62.566	50.338	31.495	1.00	25.23
ATOM C	1443	CG1	ILE	A	309	61.544	49.662	32.419	1.00	24.51
ATOM C	1444	CG2	ILE	A	309	62.134	51.756	31.123	1.00	24.72
ATOM C	1445	CD1	ILE	A	309	61.450	50.243	33.802	1.00	25.49
ATOM N	1446	N	LYS	A	310	62.881	50.643	28.125	1.00	23.39
ATOM C	1447	CA	LYS	A	310	63.527	51.310	27.003	1.00	24.09
ATOM C	1448	C	LYS	A	310	63.573	52.825	27.202	1.00	24.12
ATOM O	1449	O	LYS	A	310	62.578	53.449	27.575	1.00	22.87
ATOM C	1450	CB	LYS	A	310	62.788	50.945	25.713	1.00	25.57
ATOM C	1451	CG	LYS	A	310	63.633	51.022	24.457	1.00	27.69
ATOM C	1452	CD	LYS	A	310	63.347	49.838	23.526	1.00	27.60



TABLE 7

ATOM C	1453	CE	LYS A 310	61.915	49.849	23.020	1.00	27.87
ATOM N	1454	NZ	LYS A 310	61.614	51.110	22.280	1.00	28.37
ATOM N	1455	N	ILE A 311	64.741	53.398	26.925	1.00	23.23
ATOM C	1456	CA	ILE A 311	64.996	54.827	27.101	1.00	23.17
ATOM C	1457	C	ILE A 311	65.173	55.586	25.794	1.00	21.87
ATOM O	1458	O	ILE A 311	65.937	55.166	24.925	1.00	22.46
ATOM C	1459	CB	ILE A 311	66.301	55.045	27.901	1.00	21.23
ATOM C	1460	CG1	ILE A 311	66.238	54.291	29.236	1.00	22.02
ATOM C	1461	CG2	ILE A 311	66.537	56.532	28.122	1.00	21.42
ATOM C	1462	CD1	ILE A 311	67.601	54.143	29.891	1.00	21.94
ATOM N	1463	N	GLY A 312	64.484	56.712	25.662	1.00	24.32
ATOM C	1464	CA	GLY A 312	64.666	57.510	24.467	1.00	24.57
ATOM C	1465	C	GLY A 312	63.449	58.070	23.773	1.00	26.09
ATOM O	1466	O	GLY A 312	62.559	57.332	23.356	1.00	25.55
ATOM N	1467	N	ILE A 313	63.428	59.393	23.644	1.00	26.99
ATOM C	1468	CA	ILE A 313	62.357	60.089	22.950	1.00	28.73
ATOM C	1469	C	ILE A 313	62.968	61.275	22.215	1.00	30.51
ATOM O	1470	O	ILE A 313	63.531	62.172	22.845	1.00	30.13
ATOM C	1471	CB	ILE A 313	61.281	60.635	23.915	1.00	28.78
ATOM C	1472	CG1	ILE A 313	60.561	59.480	24.619	1.00	29.45
ATOM C	1473	CG2	ILE A 313	60.277	61.469	23.134	1.00	29.20
ATOM C	1474	CD1	ILE A 313	59.544	59.942	25.648	1.00	29.69
ATOM N	1475	N	GLY A 314	62.865	61.264	20.888	1.00	33.20
ATOM C	1476	CA	GLY A 314	63.385	62.357	20.087	1.00	36.88
ATOM C	1477	C	GLY A 314	64.748	62.144	19.454	1.00	39.48
ATOM O	1478	O	GLY A 314	65.102	62.843	18.499	1.00	40.62
ATOM N	1479	N	GLY A 315	65.506	61.177	19.967	1.00	40.05
ATOM C	1480	CA	GLY A 315	66.840	60.918	19.452	1.00	41.12

TABLE 7

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ATOM	1481	C	GLY A 315	66.950	60.152	18.146	1.00	42.12
C								
ATOM	1482	O	GLY A 315	67.977	60.235	17.469	1.00	41.49
O								
ATOM	1483	N	GLY A 316	65.906	59.409	17.790	1.00	42.04
N								
ATOM	1484	CA	GLY A 316	65.924	58.640	16.555	1.00	42.81
C								
ATOM	1485	C	GLY A 316	66.345	59.447	15.338	1.00	43.59
C								
ATOM	1486	O	GLY A 316	66.029	60.633	15.227	1.00	44.04
O								
ATOM	1487	N	SER A 317	67.056	58.800	14.419	1.00	44.63
N								
ATOM	1488	CA	SER A 317	67.535	59.453	13.204	1.00	45.96
C								
ATOM	1489	C	SER A 317	66.400	59.929	12.303	1.00	47.12
C								
ATOM	1490	O	SER A 317	66.554	60.897	11.561	1.00	46.76
O								
ATOM	1491	CB	SER A 317	68.436	58.503	12.412	1.00	45.33
C								
ATOM	1492	OG	SER A 317	67.704	57.391	11.925	1.00	44.82
O								
ATOM	1493	N	ILE A 318	65.266	59.240	12.363	1.00	49.21
N								
ATOM	1494	CA	ILE A 318	64.115	59.604	11.544	1.00	51.92
C								
ATOM	1495	C	ILE A 318	62.986	60.204	12.374	1.00	53.83
C								
ATOM	1496	O	ILE A 318	61.811	60.095	12.019	1.00	54.17
O								
ATOM	1497	CB	ILE A 318	63.581	58.381	10.754	1.00	51.77
C								
ATOM	1498	CG1	ILE A 318	63.731	57.105	11.586	1.00	51.59
C								
ATOM	1499	CG2	ILE A 318	64.339	58.237	9.441	1.00	51.61
C								
ATOM	1500	CD1	ILE A 318	62.997	57.131	12.898	1.00	51.22
C								
HETATM	1501	N	CSO A 319	63.355	60.840	13.481	1.00	56.01
N								
HETATM	1502	CA	CSO A 319	62.387	61.468	14.371	1.00	58.61
C								
HETATM	1503	CB	CSO A 319	62.457	60.825	15.760	1.00	60.16
C								
HETATM	1504	SG	CSO A 319	60.983	61.106	16.793	1.00	64.08
S								
HETATM	1505	C	CSO A 319	62.708	62.957	14.481	1.00	59.03
C								
HETATM	1506	O	CSO A 319	63.754	63.331	15.008	1.00	58.88
O								
HETATM	1507	OD	CSO A 319	60.477	62.837	16.987	1.00	63.19
O								
ATOM	1508	N	ILE A 320	61.814	63.805	13.979	1.00	59.78
N								

TABLE 7

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ATOM	1509	CA	ILE A 320	62.028	65.250	14.034	1.00	60.48
C								
ATOM	1510	C	ILE A 320	61.159	65.875	15.125	1.00	60.65
C								
ATOM	1511	O	ILE A 320	60.074	66.397	14.856	1.00	60.82
O								
ATOM	1512	CB	ILE A 320	61.706	65.913	12.676	1.00	60.96
C								
ATOM	1513	CG1	ILE A 320	62.500	65.221	11.562	1.00	61.17
C								
ATOM	1514	CG2	ILE A 320	62.064	67.398	12.721	1.00	60.93
C								
ATOM	1515	CD1	ILE A 320	62.196	65.738	10.167	1.00	61.13
C								
ATOM	1516	N	THR A 321	61.656	65.817	16.357	1.00	60.47
N								
ATOM	1517	CA	THR A 321	60.961	66.343	17.530	1.00	60.58
C								
ATOM	1518	C	THR A 321	60.288	67.701	17.323	1.00	60.31
C								
ATOM	1519	O	THR A 321	59.072	67.828	17.474	1.00	59.52
O								
ATOM	1520	CB	THR A 321	61.928	66.469	18.726	1.00	60.88
C								
ATOM	1521	OG1	THR A 321	62.632	65.234	18.906	1.00	61.19
O								
ATOM	1522	CG2	THR A 321	61.157	66.797	19.995	1.00	60.45
C								
ATOM	1523	N	ARG A 322	61.086	68.709	16.986	1.00	60.45
N								
ATOM	1524	CA	ARG A 322	60.581	70.063	16.776	1.00	60.85
C								
ATOM	1525	C	ARG A 322	59.375	70.172	15.850	1.00	60.80
C								
ATOM	1526	O	ARG A 322	58.401	70.849	16.176	1.00	60.73
O								
ATOM	1527	CB	ARG A 322	61.695	70.967	16.251	1.00	61.37
C								
ATOM	1528	CG	ARG A 322	62.696	71.397	17.305	1.00	62.07
C								
ATOM	1529	CD	ARG A 322	63.711	72.351	16.706	1.00	62.95
C								
ATOM	1530	NE	ARG A 322	64.504	73.029	17.726	1.00	63.47
N								
ATOM	1531	CZ	ARG A 322	65.442	73.931	17.458	1.00	63.65
C								
ATOM	1532	NH1	ARG A 322	65.704	74.262	16.200	1.00	63.49
N								
ATOM	1533	NH2	ARG A 322	66.115	74.504	18.445	1.00	63.65
N								
ATOM	1534	N	GLU A 323	59.437	69.522	14.693	1.00	60.59
N								
ATOM	1535	CA	GLU A 323	58.328	69.579	13.747	1.00	60.45
C								
ATOM	1536	C	GLU A 323	57.157	68.717	14.208	1.00	59.48
C								

TABLE 7

ATOM	1537	O	GLU A 323	56.231	68.454	13.439	1.00	59.76
O								
ATOM	1538	CB	GLU A 323	58.781	69.116	12.359	1.00	61.67
C								
ATOM	1539	CG	GLU A 323	59.935	69.914	11.778	1.00	63.67
C								
ATOM	1540	CD	GLU A 323	60.259	69.515	10.348	1.00	64.69
C								
ATOM	1541	OE1	GLU A 323	60.474	68.311	10.094	1.00	65.62
O								
ATOM	1542	OE2	GLU A 323	60.301	70.407	9.476	1.00	65.47
O								
ATOM	1543	N	GLN A 324	57.194	68.284	15.464	1.00	57.92
N								
ATOM	1544	CA	GLN A 324	56.131	67.446	16.001	1.00	56.25
C								
ATOM	1545	C	GLN A 324	55.529	67.984	17.300	1.00	54.10
C								
ATOM	1546	O	GLN A 324	54.872	69.026	17.300	1.00	54.39
O								
ATOM	1547	CB	GLN A 324	56.653	66.022	16.206	1.00	58.06
C								
ATOM	1548	CG	GLN A 324	57.155	65.370	14.924	1.00	60.13
C								
ATOM	1549	CD	GLN A 324	57.820	64.027	15.164	1.00	61.81
C								
ATOM	1550	OE1	GLN A 324	58.311	63.388	14.231	1.00	62.58
O								
ATOM	1551	NE2	GLN A 324	57.838	63.590	16.419	1.00	62.80
N								
ATOM	1552	N	LYS A 325	55.754	67.278	18.404	1.00	50.55
N								
ATOM	1553	CA	LYS A 325	55.200	67.685	19.693	1.00	46.97
C								
ATOM	1554	C	LYS A 325	56.157	68.456	20.589	1.00	43.59
C								
ATOM	1555	O	LYS A 325	55.731	69.086	21.558	1.00	42.57
O								
ATOM	1556	CB	LYS A 325	54.703	66.463	20.467	1.00	47.99
C								
ATOM	1557	CG	LYS A 325	53.491	65.775	19.876	1.00	50.14
C								
ATOM	1558	CD	LYS A 325	53.077	64.618	20.773	1.00	50.62
C								
ATOM	1559	CE	LYS A 325	51.895	63.874	20.208	1.00	51.86
C								
ATOM	1560	NZ	LYS A 325	51.526	62.721	21.067	1.00	52.95
N								
ATOM	1561	N	GLY A 326	57.446	68.400	20.283	1.00	39.82
N								
ATOM	1562	CA	GLY A 326	58.399	69.103	21.118	1.00	36.97
C								
ATOM	1563	C	GLY A 326	58.613	68.383	22.439	1.00	35.12
C								
ATOM	1564	O	GLY A 326	58.842	69.015	23.473	1.00	33.70
O								

TABLE 7

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ATOM	1565	N	ILE A 327	58.510	67.056	22.412	1.00	33.10
N								
ATOM	1566	CA	ILE A 327	58.732	66.255	23.609	1.00	31.94
C								
ATOM	1567	C	ILE A 327	60.039	65.500	23.399	1.00	30.96
C								
ATOM	1568	O	ILE A 327	60.360	65.095	22.283	1.00	29.97
O								
ATOM	1569	CB	ILE A 327	57.584	65.229	23.865	1.00	33.54
C								
ATOM	1570	CG1	ILE A 327	57.479	64.236	22.708	1.00	35.09
C								
ATOM	1571	CG2	ILE A 327	56.257	65.961	24.048	1.00	34.89
C								
ATOM	1572	CD1	ILE A 327	56.438	63.139	22.937	1.00	37.76
C								
ATOM	1573	N	GLY A 328	60.807	65.322	24.463	1.00	29.65
N								
ATOM	1574	CA	GLY A 328	62.058	64.606	24.312	1.00	29.68
C								
ATOM	1575	C	GLY A 328	63.106	65.030	25.316	1.00	28.25
C								
ATOM	1576	O	GLY A 328	62.838	65.825	26.220	1.00	27.09
O								
ATOM	1577	N	ARG A 329	64.309	64.494	25.147	1.00	27.34
N								
ATOM	1578	CA	ARG A 329	65.410	64.807	26.039	1.00	26.13
C								
ATOM	1579	C	ARG A 329	66.674	64.258	25.404	1.00	25.89
C								
ATOM	1580	O	ARG A 329	66.636	63.207	24.760	1.00	25.64
O								
ATOM	1581	CB	ARG A 329	65.178	64.141	27.400	1.00	26.27
C								
ATOM	1582	CG	ARG A 329	66.074	64.661	28.510	1.00	25.63
C								
ATOM	1583	CD	ARG A 329	65.816	63.929	29.809	1.00	25.44
C								
ATOM	1584	NE	ARG A 329	66.249	64.709	30.966	1.00	24.87
N								
ATOM	1585	CZ	ARG A 329	66.203	64.269	32.218	1.00	26.41
C								
ATOM	1586	NH1	ARG A 329	65.754	63.048	32.475	1.00	25.65
N								
ATOM	1587	NH2	ARG A 329	66.577	65.058	33.216	1.00	26.64
N								
ATOM	1588	N	GLY A 330	67.787	64.975	25.560	1.00	25.19
N								
ATOM	1589	CA	GLY A 330	69.040	64.497	25.002	1.00	24.58
C								
ATOM	1590	C	GLY A 330	69.218	63.063	25.469	1.00	24.73
C								
ATOM	1591	O	GLY A 330	69.010	62.770	26.645	1.00	23.16
O								
ATOM	1592	N	GLN A 331	69.617	62.174	24.566	1.00	24.37
N								

TABLE 7

ATOM C	1593	CA	GLN A 331	69.763	60.757	24.909	1.00	24.78
ATOM C	1594	C	GLN A 331	70.739	60.463	26.043	1.00	24.31
ATOM O	1595	O	GLN A 331	70.466	59.610	26.889	1.00	23.63
ATOM C	1596	CB	GLN A 331	70.162	59.947	23.667	1.00	25.13
ATOM C	1597	CG	GLN A 331	70.073	58.430	23.863	1.00	25.46
ATOM C	1598	CD	GLN A 331	68.633	57.917	23.958	1.00	28.00
ATOM O	1599	OE1	GLN A 331	68.391	56.774	24.355	1.00	29.62
ATOM N	1600	NE2	GLN A 331	67.679	58.756	23.586	1.00	26.29
ATOM N	1601	N	ALA A 332	71.878	61.155	26.064	1.00	23.62
ATOM C	1602	CA	ALA A 332	72.864	60.930	27.117	1.00	22.91
ATOM C	1603	C	ALA A 332	72.283	61.243	28.492	1.00	23.37
ATOM O	1604	O	ALA A 332	72.389	60.441	29.425	1.00	22.61
ATOM C	1605	CB	ALA A 332	74.115	61.778	26.864	1.00	23.28
ATOM N	1606	N	THR A 333	71.668	62.413	28.619	1.00	22.11
ATOM C	1607	CA	THR A 333	71.075	62.815	29.878	1.00	22.48
ATOM C	1608	C	THR A 333	69.974	61.840	30.296	1.00	22.58
ATOM O	1609	O	THR A 333	69.857	61.492	31.470	1.00	21.18
ATOM C	1610	CB	THR A 333	70.493	64.238	29.785	1.00	23.93
ATOM O	1611	OG1	THR A 333	71.547	65.160	29.457	1.00	24.95
ATOM C	1612	CG2	THR A 333	69.865	64.645	31.119	1.00	23.81
ATOM N	1613	N	ALA A 334	69.176	61.401	29.329	1.00	21.99
ATOM C	1614	CA	ALA A 334	68.093	60.462	29.600	1.00	22.69
ATOM C	1615	C	ALA A 334	68.630	59.149	30.178	1.00	22.31
ATOM O	1616	O	ALA A 334	68.113	58.632	31.175	1.00	22.17
ATOM C	1617	CB	ALA A 334	67.315	60.186	28.319	1.00	22.40
ATOM N	1618	N	VAL A 335	69.663	58.604	29.548	1.00	22.74
ATOM C	1619	CA	VAL A 335	70.248	57.349	30.019	1.00	21.65
ATOM C	1620	C	VAL A 335	70.836	57.522	31.417	1.00	22.93

TABLE 7

ATOM	1621	O	VAL A 335	70.561	56.739	32.327	1.00	22.43
O								
ATOM	1622	CB	VAL A 335	71.360	56.864	29.062	1.00	23.64
C								
ATOM	1623	CG1	VAL A 335	72.090	55.646	29.664	1.00	22.43
C								
ATOM	1624	CG2	VAL A 335	70.750	56.502	27.712	1.00	22.06
C								
ATOM	1625	N	ILE A 336	71.644	58.562	31.590	1.00	22.47
N								
ATOM	1626	CA	ILE A 336	72.275	58.816	32.879	1.00	22.53
C								
ATOM	1627	C	ILE A 336	71.251	58.936	34.005	1.00	23.00
C								
ATOM	1628	O	ILE A 336	71.418	58.363	35.087	1.00	21.54
O								
ATOM	1629	CB	ILE A 336	73.132	60.097	32.810	1.00	22.52
C								
ATOM	1630	CG1	ILE A 336	74.304	59.869	31.846	1.00	21.96
C								
ATOM	1631	CG2	ILE A 336	73.639	60.476	34.199	1.00	23.53
C								
ATOM	1632	CD1	ILE A 336	75.114	61.125	31.544	1.00	24.57
C								
ATOM	1633	N	ASP A 337	70.183	59.679	33.745	1.00	23.52
N								
ATOM	1634	CA	ASP A 337	69.146	59.880	34.750	1.00	23.90
C								
ATOM	1635	C	ASP A 337	68.406	58.575	35.066	1.00	23.59
C								
ATOM	1636	O	ASP A 337	68.220	58.212	36.234	1.00	22.64
O								
ATOM	1637	CB	ASP A 337	68.153	60.931	34.251	1.00	26.45
C								
ATOM	1638	CG	ASP A 337	67.150	61.326	35.301	1.00	28.83
C								
ATOM	1639	OD1	ASP A 337	65.975	61.536	34.943	1.00	30.37
O								
ATOM	1640	OD2	ASP A 337	67.539	61.437	36.483	1.00	32.41
O								
ATOM	1641	N	VAL A 338	67.982	57.870	34.024	1.00	22.38
N								
ATOM	1642	CA	VAL A 338	67.258	56.619	34.221	1.00	23.04
C								
ATOM	1643	C	VAL A 338	68.116	55.587	34.949	1.00	23.56
C								
ATOM	1644	O	VAL A 338	67.635	54.899	35.852	1.00	23.29
O								
ATOM	1645	CB	VAL A 338	66.776	56.030	32.875	1.00	22.58
C								
ATOM	1646	CG1	VAL A 338	66.198	54.625	33.089	1.00	21.84
C								
ATOM	1647	CG2	VAL A 338	65.707	56.941	32.269	1.00	21.24
C								
ATOM	1648	N	VAL A 339	69.383	55.489	34.559	1.00	23.76
N								

TABLE 7

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ATOM	1649	CA	VAL A 339	70.292	54.542	35.189	1.00	23.00
C								
ATOM	1650	C	VAL A 339	70.446	54.832	36.682	1.00	24.41
C								
ATOM	1651	O	VAL A 339	70.499	53.906	37.496	1.00	23.06
O								
ATOM	1652	CB	VAL A 339	71.677	54.563	34.497	1.00	23.80
C								
ATOM	1653	CG1	VAL A 339	72.729	53.905	35.382	1.00	22.59
C								
ATOM	1654	CG2	VAL A 339	71.588	53.822	33.164	1.00	22.47
C								
ATOM	1655	N	ALA A 340	70.512	56.110	37.045	1.00	23.21
N								
ATOM	1656	CA	ALA A 340	70.644	56.478	38.452	1.00	24.61
C								
ATOM	1657	C	ALA A 340	69.413	55.992	39.214	1.00	25.25
C								
ATOM	1658	O	ALA A 340	69.520	55.462	40.326	1.00	24.89
O								
ATOM	1659	CB	ALA A 340	70.783	57.992	38.591	1.00	25.22
C								
ATOM	1660	N	GLU A 341	68.243	56.168	38.608	1.00	24.78
N								
ATOM	1661	CA	GLU A 341	66.995	55.749	39.237	1.00	25.88
C								
ATOM	1662	C	GLU A 341	66.917	54.228	39.310	1.00	25.65
C								
ATOM	1663	O	GLU A 341	66.422	53.672	40.291	1.00	25.06
O								
ATOM	1664	CB	GLU A 341	65.799	56.283	38.449	1.00	26.19
C								
ATOM	1665	CG	GLU A 341	64.465	56.213	39.194	1.00	30.02
C								
ATOM	1666	CD	GLU A 341	64.419	57.128	40.411	1.00	33.39
C								
ATOM	1667	OE1	GLU A 341	64.983	58.241	40.350	1.00	35.47
O								
ATOM	1668	OE2	GLU A 341	63.804	56.744	41.424	1.00	35.11
O								
ATOM	1669	N	ARG A 342	67.403	53.566	38.265	1.00	25.58
N								
ATOM	1670	CA	ARG A 342	67.399	52.106	38.198	1.00	25.78
C								
ATOM	1671	C	ARG A 342	68.295	51.531	39.300	1.00	25.93
C								
ATOM	1672	O	ARG A 342	67.952	50.528	39.932	1.00	26.38
O								
ATOM	1673	CB	ARG A 342	67.878	51.651	36.803	1.00	24.64
C								
ATOM	1674	CG	ARG A 342	67.855	50.138	36.546	1.00	24.33
C								
ATOM	1675	CD	ARG A 342	69.100	49.431	37.092	1.00	23.54
C								
ATOM	1676	NE	ARG A 342	70.350	49.884	36.477	1.00	22.90
N								



TABLE 7

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ATOM	1677	CZ	ARG A 342	70.718	49.640	35.220	1.00	23.00
C								
ATOM	1678	NH1	ARG A 342	69.934	48.943	34.406	1.00	21.73
N								
ATOM	1679	NH2	ARG A 342	71.893	50.075	34.778	1.00	23.48
N								
ATOM	1680	N	ASN A 343	69.440	52.166	39.534	1.00	25.49
N								
ATOM	1681	CA	ASN A 343	70.355	51.697	40.571	1.00	27.07
C								
ATOM	1682	C	ASN A 343	69.774	51.944	41.964	1.00	27.92
C								
ATOM	1683	O	ASN A 343	69.976	51.150	42.887	1.00	27.27
O								
ATOM	1684	CB	ASN A 343	71.722	52.373	40.422	1.00	27.28
C								
ATOM	1685	CG	ASN A 343	72.457	51.921	39.171	1.00	28.20
C								
ATOM	1686	OD1	ASN A 343	72.178	50.844	38.634	1.00	27.39
O								
ATOM	1687	ND2	ASN A 343	73.412	52.728	38.712	1.00	27.58
N								
ATOM	1688	N	LYS A 344	69.042	53.044	42.108	1.00	27.67
N								
ATOM	1689	CA	LYS A 344	68.402	53.376	43.374	1.00	29.76
C								
ATOM	1690	C	LYS A 344	67.313	52.334	43.617	1.00	29.60
C								
ATOM	1691	O	LYS A 344	67.162	51.810	44.726	1.00	30.86
O								
ATOM	1692	CB	LYS A 344	67.790	54.780	43.290	1.00	31.91
C								
ATOM	1693	CG	LYS A 344	67.158	55.286	44.574	1.00	37.21
C								
ATOM	1694	CD	LYS A 344	66.732	56.745	44.414	1.00	40.26
C								
ATOM	1695	CE	LYS A 344	66.241	57.339	45.725	1.00	42.77
C								
ATOM	1696	NZ	LYS A 344	66.010	58.812	45.594	1.00	44.75
N								
ATOM	1697	N	TYR A 345	66.564	52.023	42.564	1.00	28.67
N								
ATOM	1698	CA	TYR A 345	65.491	51.034	42.640	1.00	28.68
C								
ATOM	1699	C	TYR A 345	66.042	49.669	43.064	1.00	29.72
C								
ATOM	1700	O	TYR A 345	65.456	48.977	43.902	1.00	29.46
O								
ATOM	1701	CB	TYR A 345	64.816	50.896	41.280	1.00	27.98
C								
ATOM	1702	CG	TYR A 345	63.497	50.163	41.314	1.00	28.95
C								
ATOM	1703	CD1	TYR A 345	62.325	50.822	41.684	1.00	30.04
C								
ATOM	1704	CD2	TYR A 345	63.412	48.821	40.945	1.00	29.16
C								

TABLE 7

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ATOM	1705	CE1	TYR A 345	61.099	50.165	41.677	1.00	30.92
C								
ATOM	1706	CE2	TYR A 345	62.189	48.154	40.937	1.00	30.52
C								
ATOM	1707	CZ	TYR A 345	61.039	48.837	41.300	1.00	31.09
C								
ATOM	1708	OH	TYR A 345	59.820	48.205	41.256	1.00	32.41
O								
ATOM	1709	N	PHE A 346	67.162	49.281	42.467	1.00	29.90
N								
ATOM	1710	CA	PHE A 346	67.795	48.003	42.784	1.00	31.06
C								
ATOM	1711	C	PHE A 346	68.170	47.932	44.262	1.00	32.66
C								
ATOM	1712	O	PHE A 346	67.958	46.913	44.918	1.00	32.46
O								
ATOM	1713	CB	PHE A 346	69.051	47.814	41.932	1.00	30.74
C								
ATOM	1714	CG	PHE A 346	69.844	46.589	42.287	1.00	31.11
C								
ATOM	1715	CD1	PHE A 346	69.329	45.319	42.053	1.00	29.91
C								
ATOM	1716	CD2	PHE A 346	71.107	46.708	42.861	1.00	32.41
C								
ATOM	1717	CE1	PHE A 346	70.061	44.177	42.383	1.00	30.76
C								
ATOM	1718	CE2	PHE A 346	71.850	45.572	43.197	1.00	33.67
C								
ATOM	1719	CZ	PHE A 346	71.321	44.303	42.954	1.00	32.41
C								
ATOM	1720	N	GLU A 347	68.726	49.021	44.782	1.00	33.10
N								
ATOM	1721	CA	GLU A 347	69.130	49.072	46.182	1.00	36.04
C								
ATOM	1722	C	GLU A 347	67.933	49.020	47.127	1.00	35.98
C								
ATOM	1723	O	GLU A 347	68.032	48.491	48.235	1.00	35.44
O								
ATOM	1724	CB	GLU A 347	69.947	50.340	46.448	1.00	37.89
C								
ATOM	1725	CG	GLU A 347	71.259	50.392	45.672	1.00	42.81
C								
ATOM	1726	CD	GLU A 347	72.257	49.319	46.102	1.00	46.57
C								
ATOM	1727	OE1	GLU A 347	73.243	49.099	45.363	1.00	48.05
O								
ATOM	1728	OE2	GLU A 347	72.071	48.702	47.177	1.00	48.54
O								
ATOM	1729	N	GLU A 348	66.802	49.560	46.687	1.00	35.06
N								
ATOM	1730	CA	GLU A 348	65.603	49.579	47.513	1.00	35.70
C								
ATOM	1731	C	GLU A 348	64.834	48.261	47.511	1.00	35.13
C								
ATOM	1732	O	GLU A 348	64.349	47.817	48.551	1.00	34.62
O								

TABLE 7

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ATOM C	1733	CB	GLU A 348	64.633	50.671	47.043	1.00	37.06
ATOM C	1734	CG	GLU A 348	65.237	52.044	46.812	1.00	39.63
ATOM C	1735	CD	GLU A 348	64.207	53.056	46.324	1.00	40.78
ATOM O	1736	OE1	GLU A 348	63.274	52.662	45.592	1.00	40.73
ATOM O	1737	OE2	GLU A 348	64.340	54.251	46.660	1.00	43.08
ATOM N	1738	N	THR A 349	64.727	47.640	46.342	1.00	33.88
ATOM C	1739	CA	THR A 349	63.948	46.415	46.187	1.00	33.76
ATOM C	1740	C	THR A 349	64.713	45.121	45.922	1.00	33.08
ATOM O	1741	O	THR A 349	64.136	44.040	46.007	1.00	33.38
ATOM C	1742	CB	THR A 349	62.955	46.567	45.029	1.00	33.48
ATOM O	1743	OG1	THR A 349	63.686	46.612	43.794	1.00	32.62
ATOM C	1744	CG2	THR A 349	62.147	47.859	45.173	1.00	33.82
ATOM N	1745	N	GLY A 350	65.991	45.227	45.584	1.00	32.81
ATOM C	1746	CA	GLY A 350	66.762	44.035	45.283	1.00	31.80
ATOM C	1747	C	GLY A 350	66.481	43.557	43.865	1.00	31.19
ATOM O	1748	O	GLY A 350	66.976	42.515	43.440	1.00	31.53
ATOM N	1749	N	ILE A 351	65.687	44.327	43.125	1.00	30.11
ATOM C	1750	CA	ILE A 351	65.338	43.982	41.749	1.00	28.23
ATOM C	1751	C	ILE A 351	66.182	44.775	40.751	1.00	26.97
ATOM O	1752	O	ILE A 351	66.188	46.005	40.780	1.00	25.49
ATOM C	1753	CB	ILE A 351	63.859	44.308	41.442	1.00	30.29
ATOM C	1754	CG1	ILE A 351	62.934	43.608	42.442	1.00	31.76
ATOM C	1755	CG2	ILE A 351	63.533	43.901	40.008	1.00	30.03
ATOM C	1756	CD1	ILE A 351	61.497	44.104	42.383	1.00	33.25
ATOM N	1757	N	TYR A 352	66.888	44.075	39.872	1.00	25.98
ATOM C	1758	CA	TYR A 352	67.699	44.747	38.862	1.00	25.54
ATOM C	1759	C	TYR A 352	66.955	44.707	37.541	1.00	25.29
ATOM O	1760	O	TYR A 352	66.696	43.631	37.002	1.00	24.79

ATOM	1761	CB	TYR A 352	69.055	44.064	38.674	1.00	26.27
C								
ATOM	1762	CG	TYR A 352	69.950	44.807	37.696	1.00	25.26
C								
ATOM	1763	CD1	TYR A 352	70.741	45.873	38.122	1.00	25.87
C								
ATOM	1764	CD2	TYR A 352	69.983	44.464	36.342	1.00	26.91
C								
ATOM	1765	CE1	TYR A 352	71.545	46.578	37.235	1.00	25.26
C								
ATOM	1766	CE2	TYR A 352	70.788	45.172	35.436	1.00	26.20
C								
ATOM	1767	CZ	TYR A 352	71.568	46.226	35.895	1.00	25.73
C								
ATOM	1768	OH	TYR A 352	72.394	46.918	35.030	1.00	24.57
O								
ATOM	1769	N	ILE A 353	66.623	45.884	37.016	1.00	24.76
N								
ATOM	1770	CA	ILE A 353	65.906	45.984	35.754	1.00	24.38
C								
ATOM	1771	C	ILE A 353	66.813	46.507	34.648	1.00	24.63
C								
ATOM	1772	O	ILE A 353	67.263	47.652	34.695	1.00	23.98
O								
ATOM	1773	CB	ILE A 353	64.697	46.939	35.877	1.00	25.07
C								
ATOM	1774	CG1	ILE A 353	63.745	46.435	36.974	1.00	25.69
C								
ATOM	1775	CG2	ILE A 353	63.977	47.030	34.531	1.00	24.50
C								
ATOM	1776	CD1	ILE A 353	62.534	47.308	37.205	1.00	25.89
C								
ATOM	1777	N	PRO A 354	67.111	45.667	33.642	1.00	24.90
N								
ATOM	1778	CA	PRO A 354	67.974	46.100	32.537	1.00	24.20
C								
ATOM	1779	C	PRO A 354	67.311	47.244	31.779	1.00	24.12
C								
ATOM	1780	O	PRO A 354	66.089	47.268	31.641	1.00	24.10
O								
ATOM	1781	CB	PRO A 354	68.085	44.846	31.669	1.00	24.27
C								
ATOM	1782	CG	PRO A 354	67.941	43.720	32.681	1.00	23.16
C								
ATOM	1783	CD	PRO A 354	66.802	44.229	33.536	1.00	24.40
C								
ATOM	1784	N	VAL A 355	68.109	48.191	31.295	1.00	23.66
N								
ATOM	1785	CA	VAL A 355	67.556	49.298	30.526	1.00	22.79
C								
ATOM	1786	C	VAL A 355	68.210	49.322	29.158	1.00	23.11
C								
ATOM	1787	O	VAL A 355	69.359	48.916	28.990	1.00	22.38
O								
ATOM	1788	CB	VAL A 355	67.735	50.671	31.239	1.00	22.02
C								

TABLE 7

ATOM C	1789	CG1	VAL A 355	66.979	50.665	32.555	1.00	22.53
ATOM C	1790	CG2	VAL A 355	69.209	50.981	31.456	1.00	20.21
ATOM N	1791	N	CYS A 356	67.454	49.794	28.178	1.00	23.23
ATOM C	1792	CA	CYS A 356	67.906	49.842	26.802	1.00	23.04
ATOM C	1793	C	CYS A 356	67.981	51.272	26.287	1.00	23.29
ATOM O	1794	O	CYS A 356	67.023	52.025	26.414	1.00	22.76
ATOM C	1795	CB	CYS A 356	66.924	49.035	25.940	1.00	25.03
ATOM S	1796	SG	CYS A 356	67.126	49.192	24.147	1.00	25.41
ATOM N	1797	N	SER A 357	69.126	51.647	25.727	1.00	22.98
ATOM C	1798	CA	SER A 357	69.268	52.975	25.148	1.00	22.85
ATOM C	1799	C	SER A 357	68.771	52.806	23.718	1.00	23.16
ATOM O	1800	O	SER A 357	69.398	52.122	22.913	1.00	22.80
ATOM C	1801	CB	SER A 357	70.724	53.428	25.138	1.00	21.98
ATOM O	1802	OG	SER A 357	70.813	54.733	24.584	1.00	23.23
ATOM N	1803	N	ASP A 358	67.646	53.441	23.417	1.00	22.79
ATOM C	1804	CA	ASP A 358	67.020	53.333	22.109	1.00	24.60
ATOM C	1805	C	ASP A 358	67.090	54.614	21.279	1.00	25.62
ATOM O	1806	O	ASP A 358	66.466	55.616	21.617	1.00	25.58
ATOM C	1807	CB	ASP A 358	65.560	52.900	22.314	1.00	24.15
ATOM C	1808	CG	ASP A 358	64.776	52.816	21.026	1.00	25.77
ATOM O	1809	OD1	ASP A 358	65.394	52.717	19.943	1.00	25.59
ATOM O	1810	OD2	ASP A 358	63.530	52.833	21.111	1.00	25.33
ATOM N	1811	N	GLY A 359	67.860	54.562	20.193	1.00	28.47
ATOM C	1812	CA	GLY A 359	67.989	55.702	19.302	1.00	30.93
ATOM C	1813	C	GLY A 359	69.129	56.657	19.604	1.00	33.00
ATOM O	1814	O	GLY A 359	69.679	56.665	20.706	1.00	33.66
ATOM N	1815	N	GLY A 360	69.490	57.463	18.610	1.00	34.46
ATOM C	1816	CA	GLY A 360	70.551	58.434	18.793	1.00	35.68

TABLE 7

ATOM C	1817	C	GLY A 360	71.968	57.960	18.533	1.00	36.49
ATOM O	1818	O	GLY A 360	72.905	58.740	18.671	1.00	38.41
ATOM N	1819	N	ILE A 361	72.146	56.696	18.169	1.00	36.80
ATOM C	1820	CA	ILE A 361	73.486	56.186	17.895	1.00	37.13
ATOM C	1821	C	ILE A 361	73.885	56.609	16.483	1.00	38.00
ATOM O	1822	O	ILE A 361	73.275	56.173	15.506	1.00	37.36
ATOM C	1823	CB	ILE A 361	73.543	54.640	17.980	1.00	37.20
ATOM C	1824	CG1	ILE A 361	73.123	54.166	19.377	1.00	36.99
ATOM C	1825	CG2	ILE A 361	74.951	54.153	17.666	1.00	37.15
ATOM C	1826	CD1	ILE A 361	74.050	54.607	20.493	1.00	36.40
ATOM N	1827	N	VAL A 362	74.898	57.466	16.384	1.00	37.48
ATOM C	1828	CA	VAL A 362	75.373	57.940	15.088	1.00	38.82
ATOM C	1829	C	VAL A 362	76.707	57.292	14.735	1.00	38.61
ATOM O	1830	O	VAL A 362	76.916	56.862	13.599	1.00	39.64
ATOM C	1831	CB	VAL A 362	75.548	59.473	15.082	1.00	39.34
ATOM C	1832	CG1	VAL A 362	76.006	59.946	13.701	1.00	41.47
ATOM C	1833	CG2	VAL A 362	74.241	60.142	15.458	1.00	40.61
ATOM N	1834	N	TYR A 363	77.600	57.215	15.719	1.00	37.19
ATOM C	1835	CA	TYR A 363	78.921	56.624	15.530	1.00	36.38
ATOM C	1836	C	TYR A 363	79.131	55.425	16.447	1.00	34.11
ATOM O	1837	O	TYR A 363	78.471	55.303	17.477	1.00	32.33
ATOM C	1838	CB	TYR A 363	80.004	57.661	15.820	1.00	39.61
ATOM C	1839	CG	TYR A 363	79.918	58.894	14.957	1.00	43.43
ATOM C	1840	CD1	TYR A 363	79.948	58.795	13.565	1.00	45.21
ATOM C	1841	CD2	TYR A 363	79.824	60.162	15.527	1.00	44.88
ATOM C	1842	CE1	TYR A 363	79.889	59.933	12.761	1.00	47.51
ATOM C	1843	CE2	TYR A 363	79.766	61.308	14.731	1.00	47.32
ATOM C	1844	CZ	TYR A 363	79.800	61.184	13.351	1.00	47.96

TABLE 7

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ATOM	1845	OH	TYR A 363	79.755	62.310	12.556	1.00	49.68
O								
ATOM	1846	N	ASP A 364	80.059	54.548	16.079	1.00	32.88
N								
ATOM	1847	CA	ASP A 364	80.341	53.375	16.899	1.00	32.27
C								
ATOM	1848	C	ASP A 364	80.649	53.733	18.352	1.00	30.99
C								
ATOM	1849	O	ASP A 364	80.189	53.050	19.266	1.00	31.26
O								
ATOM	1850	CB	ASP A 364	81.531	52.574	16.351	1.00	34.38
C								
ATOM	1851	CG	ASP A 364	81.224	51.867	15.040	1.00	36.34
C								
ATOM	1852	OD1	ASP A 364	80.081	51.396	14.850	1.00	37.26
O								
ATOM	1853	OD2	ASP A 364	82.147	51.767	14.205	1.00	37.51
O								
ATOM	1854	N	TYR A 365	81.421	54.796	18.576	1.00	29.18
N								
ATOM	1855	CA	TYR A 365	81.776	55.153	19.949	1.00	27.62
C								
ATOM	1856	C	TYR A 365	80.571	55.537	20.796	1.00	27.21
C								
ATOM	1857	O	TYR A 365	80.638	55.497	22.019	1.00	25.96
O								
ATOM	1858	CB	TYR A 365	82.846	56.257	19.982	1.00	28.21
C								
ATOM	1859	CG	TYR A 365	82.351	57.679	19.854	1.00	29.19
C								
ATOM	1860	CD1	TYR A 365	82.157	58.483	20.983	1.00	30.31
C								
ATOM	1861	CD2	TYR A 365	82.135	58.242	18.602	1.00	30.72
C								
ATOM	1862	CE1	TYR A 365	81.765	59.824	20.854	1.00	31.27
C								
ATOM	1863	CE2	TYR A 365	81.746	59.568	18.464	1.00	32.19
C								
ATOM	1864	CZ	TYR A 365	81.565	60.353	19.587	1.00	32.87
C								
ATOM	1865	OH	TYR A 365	81.178	61.664	19.418	1.00	35.54
O								
ATOM	1866	N	HIS A 366	79.465	55.896	20.149	1.00	25.79
N								
ATOM	1867	CA	HIS A 366	78.253	56.229	20.888	1.00	26.00
C								
ATOM	1868	C	HIS A 366	77.757	54.963	21.582	1.00	25.36
C								
ATOM	1869	O	HIS A 366	77.091	55.035	22.616	1.00	24.64
O								
ATOM	1870	CB	HIS A 366	77.160	56.760	19.956	1.00	26.79
C								
ATOM	1871	CG	HIS A 366	77.409	58.148	19.455	1.00	28.37
C								
ATOM	1872	ND1	HIS A 366	78.402	58.958	19.963	1.00	29.63
N								

TABLE 7

ATOM C	1873	CD2 HIS A 366	76.774	58.880	18.510	1.00	28.28
ATOM C	1874	CE1 HIS A 366	78.368	60.129	19.352	1.00	27.78
ATOM N	1875	NE2 HIS A 366	77.390	60.108	18.466	1.00	29.94
ATOM N	1876	N MET A 367	78.067	53.803	21.000	1.00	24.84
ATOM C	1877	CA MET A 367	77.663	52.530	21.602	1.00	25.78
ATOM C	1878	C MET A 367	78.401	52.385	22.927	1.00	24.73
ATOM O	1879	O MET A 367	77.816	52.063	23.950	1.00	23.39
ATOM C	1880	CB MET A 367	78.035	51.343	20.704	1.00	26.59
ATOM C	1881	CG MET A 367	77.291	51.272	19.369	1.00	30.31
ATOM S	1882	SD MET A 367	77.849	49.839	18.398	1.00	32.89
ATOM C	1883	CE MET A 367	77.037	50.144	16.824	1.00	32.21
ATOM N	1884	N THR A 368	79.707	52.611	22.881	1.00	24.71
ATOM C	1885	CA THR A 368	80.547	52.510	24.064	1.00	24.03
ATOM C	1886	C THR A 368	80.063	53.484	25.135	1.00	23.45
ATOM O	1887	O THR A 368	79.985	53.133	26.306	1.00	23.07
ATOM C	1888	CB THR A 368	82.006	52.816	23.701	1.00	24.76
ATOM O	1889	OG1 THR A 368	82.349	52.081	22.518	1.00	24.31
ATOM C	1890	CG2 THR A 368	82.942	52.411	24.835	1.00	24.75
ATOM N	1891	N LEU A 369	79.744	54.710	24.731	1.00	23.16
ATOM C	1892	CA LEU A 369	79.249	55.722	25.666	1.00	24.00
ATOM C	1893	C LEU A 369	77.939	55.308	26.335	1.00	23.72
ATOM O	1894	O LEU A 369	77.797	55.411	27.551	1.00	23.10
ATOM C	1895	CB LEU A 369	79.033	57.057	24.947	1.00	24.17
ATOM C	1896	CG LEU A 369	80.281	57.884	24.624	1.00	26.48
ATOM C	1897	CD1 LEU A 369	79.897	59.087	23.772	1.00	26.96
ATOM C	1898	CD2 LEU A 369	80.943	58.342	25.926	1.00	26.87
ATOM N	1899	N ALA A 370	76.986	54.837	25.533	1.00	22.35
ATOM C	1900	CA ALA A 370	75.686	54.424	26.056	1.00	23.03



TABLE 7

ATOM C	1901	C	ALA A 370	75.857	53.331	27.108	1.00	22.11
ATOM O	1902	O	ALA A 370	75.228	53.361	28.162	1.00	22.10
ATOM C	1903	CB	ALA A 370	74.803	53.917	24.917	1.00	21.13
ATOM N	1904	N	LEU A 371	76.707	52.361	26.805	1.00	21.79
ATOM C	1905	CA	LEU A 371	76.960	51.261	27.726	1.00	22.39
ATOM C	1906	C	LEU A 371	77.685	51.777	28.972	1.00	21.96
ATOM O	1907	O	LEU A 371	77.355	51.399	30.098	1.00	21.20
ATOM C	1908	CB	LEU A 371	77.803	50.186	27.030	1.00	21.70
ATOM C	1909	CG	LEU A 371	77.170	49.473	25.820	1.00	22.99
ATOM C	1910	CD1	LEU A 371	78.221	48.634	25.112	1.00	24.60
ATOM C	1911	CD2	LEU A 371	76.009	48.591	26.270	1.00	23.11
ATOM N	1912	N	ALA A 372	78.680	52.636	28.770	1.00	21.79
ATOM C	1913	CA	ALA A 372	79.437	53.182	29.894	1.00	21.89
ATOM C	1914	C	ALA A 372	78.534	53.993	30.812	1.00	23.49
ATOM O	1915	O	ALA A 372	78.720	54.004	32.032	1.00	22.41
ATOM C	1916	CB	ALA A 372	80.585	54.052	29.387	1.00	22.98
ATOM N	1917	N	MET A 373	77.550	54.675	30.231	1.00	22.86
ATOM C	1918	CA	MET A 373	76.632	55.471	31.039	1.00	23.45
ATOM C	1919	C	MET A 373	75.650	54.609	31.829	1.00	23.67
ATOM O	1920	O	MET A 373	74.913	55.119	32.665	1.00	24.88
ATOM C	1921	CB	MET A 373	75.884	56.474	30.159	1.00	23.86
ATOM C	1922	CG	MET A 373	76.792	57.571	29.612	1.00	25.21
ATOM S	1923	SD	MET A 373	75.984	58.618	28.385	1.00	26.48
ATOM C	1924	CE	MET A 373	77.324	59.787	28.016	1.00	26.43
ATOM N	1925	N	GLY A 374	75.635	53.302	31.572	1.00	23.45
ATOM C	1926	CA	GLY A 374	74.745	52.443	32.332	1.00	22.34
ATOM C	1927	C	GLY A 374	73.740	51.597	31.573	1.00	22.77
ATOM O	1928	O	GLY A 374	73.118	50.714	32.162	1.00	23.42

TABLE 7

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ATOM N	1929	N	ALA A 375	73.560	51.851	30.283	1.00	22.25
ATOM C	1930	CA	ALA A 375	72.614	51.051	29.509	1.00	22.62
ATOM C	1931	C	ALA A 375	73.143	49.625	29.389	1.00	23.21
ATOM O	1932	O	ALA A 375	74.329	49.416	29.134	1.00	23.32
ATOM C	1933	CB	ALA A 375	72.418	51.652	28.120	1.00	22.37
ATOM N	1934	N	ASP A 376	72.263	48.645	29.580	1.00	22.37
ATOM C	1935	CA	ASP A 376	72.661	47.244	29.478	1.00	23.13
ATOM C	1936	C	ASP A 376	72.750	46.840	28.012	1.00	23.56
ATOM O	1937	O	ASP A 376	73.624	46.064	27.624	1.00	23.83
ATOM C	1938	CB	ASP A 376	71.665	46.377	30.241	1.00	23.78
ATOM C	1939	CG	ASP A 376	71.596	46.756	31.706	1.00	24.06
ATOM O	1940	OD1	ASP A 376	72.420	46.246	32.499	1.00	25.54
ATOM O	1941	OD2	ASP A 376	70.734	47.586	32.062	1.00	23.75
ATOM N	1942	N	PHE A 377	71.841	47.355	27.193	1.00	23.34
ATOM C	1943	CA	PHE A 377	71.904	47.076	25.768	1.00	23.57
ATOM C	1944	C	PHE A 377	71.414	48.262	24.948	1.00	23.98
ATOM O	1945	O	PHE A 377	70.882	49.228	25.490	1.00	23.49
ATOM C	1946	CB	PHE A 377	71.168	45.778	25.385	1.00	23.30
ATOM C	1947	CG	PHE A 377	69.758	45.684	25.887	1.00	24.76
ATOM C	1948	CD1	PHE A 377	69.495	45.318	27.203	1.00	26.77
ATOM C	1949	CD2	PHE A 377	68.688	45.900	25.025	1.00	24.49
ATOM C	1950	CE1	PHE A 377	68.180	45.163	27.652	1.00	26.00
ATOM C	1951	CE2	PHE A 377	67.370	45.747	25.465	1.00	25.78
ATOM C	1952	CZ	PHE A 377	67.118	45.379	26.777	1.00	25.44
ATOM N	1953	N	ILE A 378	71.610	48.181	23.639	1.00	23.02
ATOM C	1954	CA	ILE A 378	71.278	49.271	22.738	1.00	23.35
ATOM C	1955	C	ILE A 378	70.335	48.846	21.621	1.00	23.49
ATOM O	1956	O	ILE A 378	70.502	47.778	21.045	1.00	24.62

TABLE 7

ATOM C	1957	CB	ILE A 378	72.592	49.816	22.107	1.00	23.26
ATOM C	1958	CG1	ILE A 378	73.571	50.202	23.227	1.00	24.03
ATOM C	1959	CG2	ILE A 378	72.306	51.011	21.192	1.00	24.70
ATOM C	1960	CD1	ILE A 378	75.017	50.325	22.756	1.00	26.63
ATOM N	1961	N	MET A 379	69.335	49.675	21.331	1.00	23.56
ATOM C	1962	CA	MET A 379	68.418	49.374	20.238	1.00	23.95
ATOM C	1963	C	MET A 379	68.755	50.340	19.109	1.00	24.40
ATOM O	1964	O	MET A 379	68.915	51.540	19.338	1.00	23.43
ATOM C	1965	CB	MET A 379	66.952	49.551	20.661	1.00	24.65
ATOM C	1966	CG	MET A 379	65.968	49.319	19.508	1.00	24.74
ATOM S	1967	SD	MET A 379	64.236	49.290	19.988	1.00	26.39
ATOM C	1968	CE	MET A 379	64.115	47.609	20.644	1.00	27.00
ATOM N	1969	N	LEU A 380	68.881	49.815	17.896	1.00	24.73
ATOM C	1970	CA	LEU A 380	69.216	50.642	16.744	1.00	25.39
ATOM C	1971	C	LEU A 380	68.334	50.345	15.545	1.00	25.28
ATOM O	1972	O	LEU A 380	67.952	49.197	15.316	1.00	25.31
ATOM C	1973	CB	LEU A 380	70.673	50.421	16.329	1.00	26.35
ATOM C	1974	CG	LEU A 380	71.756	50.577	17.403	1.00	27.26
ATOM C	1975	CD1	LEU A 380	71.877	49.280	18.189	1.00	29.84
ATOM C	1976	CD2	LEU A 380	73.081	50.896	16.740	1.00	28.50
ATOM N	1977	N	GLY A 381	68.034	51.388	14.778	1.00	25.23
ATOM C	1978	CA	GLY A 381	67.221	51.232	13.584	1.00	27.24
ATOM C	1979	C	GLY A 381	68.057	51.437	12.331	1.00	27.95
ATOM O	1980	O	GLY A 381	68.330	50.493	11.592	1.00	28.13
ATOM N	1981	N	ARG A 382	68.473	52.680	12.107	1.00	29.76
ATOM C	1982	CA	ARG A 382	69.279	53.061	10.945	1.00	31.76
ATOM C	1983	C	ARG A 382	70.494	52.150	10.748	1.00	32.08
ATOM O	1984	O	ARG A 382	70.778	51.702	9.632	1.00	30.90

TABLE 7

ATOM C	1985	CB	ARG A 382	69.744	54.510	11.109	1.00	34.27
ATOM C	1986	CG	ARG A 382	70.563	55.063	9.952	1.00	39.22
ATOM C	1987	CD	ARG A 382	71.207	56.388	10.339	1.00	42.02
ATOM N	1988	NE	ARG A 382	72.131	56.221	11.460	1.00	45.45
ATOM C	1989	CZ	ARG A 382	73.260	55.518	11.399	1.00	47.01
ATOM N	1990	NH1	ARG A 382	73.610	54.920	10.267	1.00	48.07
ATOM N	1991	NH2	ARG A 382	74.033	55.399	12.471	1.00	47.88
ATOM N	1992	N	TYR A 383	71.208	51.883	11.838	1.00	30.72
ATOM C	1993	CA	TYR A 383	72.395	51.032	11.804	1.00	30.04
ATOM C	1994	C	TYR A 383	72.136	49.699	11.098	1.00	29.56
ATOM O	1995	O	TYR A 383	72.922	49.272	10.252	1.00	30.58
ATOM C	1996	CB	TYR A 383	72.876	50.761	13.234	1.00	29.03
ATOM C	1997	CG	TYR A 383	74.100	49.878	13.329	1.00	28.59
ATOM C	1998	CD1	TYR A 383	75.381	50.413	13.201	1.00	29.36
ATOM C	1999	CD2	TYR A 383	73.975	48.505	13.538	1.00	28.86
ATOM C	2000	CE1	TYR A 383	76.509	49.602	13.280	1.00	29.26
ATOM C	2001	CE2	TYR A 383	75.097	47.683	13.617	1.00	28.40
ATOM C	2002	CZ	TYR A 383	76.360	48.240	13.486	1.00	28.60
ATOM O	2003	OH	TYR A 383	77.475	47.437	13.551	1.00	28.39
ATOM N	2004	N	PHE A 384	71.034	49.048	11.452	1.00	29.09
ATOM C	2005	CA	PHE A 384	70.679	47.757	10.872	1.00	29.81
ATOM C	2006	C	PHE A 384	69.991	47.843	9.510	1.00	30.44
ATOM O	2007	O	PHE A 384	70.102	46.922	8.701	1.00	30.80
ATOM C	2008	CB	PHE A 384	69.785	46.976	11.842	1.00	29.45
ATOM C	2009	CG	PHE A 384	70.511	46.460	13.057	1.00	28.89
ATOM C	2010	CD1	PHE A 384	71.469	45.455	12.936	1.00	28.54
ATOM C	2011	CD2	PHE A 384	70.237	46.980	14.322	1.00	28.04
ATOM C	2012	CE1	PHE A 384	72.146	44.973	14.054	1.00	28.18

TABLE 7

ATOM C	2013	CE2	PHE A 384	70.905	46.506	15.446	1.00	27.99
ATOM C	2014	CZ	PHE A 384	71.864	45.500	15.313	1.00	27.33
ATOM N	2015	N	ALA A 385	69.286	48.940	9.258	1.00	31.37
ATOM C	2016	CA	ALA A 385	68.582	49.118	7.991	1.00	32.83
ATOM C	2017	C	ALA A 385	69.530	49.082	6.795	1.00	33.97
ATOM O	2018	O	ALA A 385	69.137	48.700	5.694	1.00	34.53
ATOM C	2019	CB	ALA A 385	67.815	50.433	8.004	1.00	31.76
ATOM N	2020	N	ARG A 386	70.779	49.482	7.018	1.00	35.25
ATOM C	2021	CA	ARG A 386	71.786	49.508	5.960	1.00	35.62
ATOM C	2022	C	ARG A 386	72.237	48.120	5.511	1.00	36.16
ATOM O	2023	O	ARG A 386	72.911	47.986	4.488	1.00	35.70
ATOM C	2024	CB	ARG A 386	73.027	50.272	6.428	1.00	36.74
ATOM C	2025	CG	ARG A 386	72.816	51.708	6.857	1.00	38.32
ATOM C	2026	CD	ARG A 386	74.090	52.191	7.536	1.00	40.83
ATOM N	2027	NE	ARG A 386	74.477	51.251	8.585	1.00	42.25
ATOM C	2028	CZ	ARG A 386	75.726	51.019	8.973	1.00	42.05
ATOM N	2029	NH1	ARG A 386	76.737	51.661	8.401	1.00	41.85
ATOM N	2030	NH2	ARG A 386	75.960	50.131	9.930	1.00	41.04
ATOM N	2031	N	PHE A 387	71.875	47.088	6.266	1.00	36.71
ATOM C	2032	CA	PHE A 387	72.309	45.740	5.928	1.00	37.28
ATOM C	2033	C	PHE A 387	71.442	44.973	4.938	1.00	38.78
ATOM O	2034	O	PHE A 387	70.249	45.233	4.779	1.00	38.34
ATOM C	2035	CB	PHE A 387	72.483	44.900	7.202	1.00	37.27
ATOM C	2036	CG	PHE A 387	73.397	45.524	8.222	1.00	36.45
ATOM C	2037	CD1	PHE A 387	74.507	46.263	7.826	1.00	36.98
ATOM C	2038	CD2	PHE A 387	73.152	45.364	9.584	1.00	36.75
ATOM C	2039	CE1	PHE A 387	75.362	46.838	8.771	1.00	36.90
ATOM C	2040	CE2	PHE A 387	73.998	45.931	10.536	1.00	35.15

ATOM C	2041	CZ	PHE A 387	75.104	46.670	10.130	1.00	36.18
ATOM N	2042	N	GLU A 388	72.081	44.013	4.280	1.00	39.94
ATOM C	2043	CA	GLU A 388	71.442	43.155	3.294	1.00	41.27
ATOM C	2044	C	GLU A 388	70.225	42.453	3.878	1.00	41.01
ATOM O	2045	O	GLU A 388	69.216	42.268	3.195	1.00	40.68
ATOM C	2046	CB	GLU A 388	72.453	42.111	2.809	1.00	42.64
ATOM C	2047	CG	GLU A 388	71.901	41.064	1.853	1.00	46.30
ATOM C	2048	CD	GLU A 388	71.435	41.660	0.542	1.00	47.81
ATOM O	2049	OE1	GLU A 388	72.184	42.474	-0.033	1.00	49.41
ATOM O	2050	OE2	GLU A 388	70.326	41.310	0.081	1.00	50.01
ATOM N	2051	N	GLU A 389	70.317	42.076	5.150	1.00	40.05
ATOM C	2052	CA	GLU A 389	69.230	41.365	5.807	1.00	39.60
ATOM C	2053	C	GLU A 389	68.002	42.182	6.200	1.00	39.15
ATOM O	2054	O	GLU A 389	67.006	41.605	6.628	1.00	38.91
ATOM C	2055	CB	GLU A 389	69.758	40.611	7.031	1.00	39.09
ATOM C	2056	CG	GLU A 389	70.789	39.544	6.685	1.00	38.57
ATOM C	2057	CD	GLU A 389	72.223	40.049	6.746	1.00	37.83
ATOM O	2058	OE1	GLU A 389	72.453	41.267	6.600	1.00	38.50
ATOM O	2059	OE2	GLU A 389	73.128	39.216	6.929	1.00	37.79
ATOM N	2060	N	SER A 390	68.057	43.505	6.080	1.00	39.34
ATOM C	2061	CA	SER A 390	66.879	44.303	6.417	1.00	41.26
ATOM C	2062	C	SER A 390	65.839	43.965	5.343	1.00	42.43
ATOM O	2063	O	SER A 390	66.193	43.713	4.192	1.00	42.09
ATOM C	2064	CB	SER A 390	67.194	45.799	6.408	1.00	40.53
ATOM O	2065	OG	SER A 390	67.514	46.256	5.111	1.00	44.02
ATOM N	2066	N	PRO A 391	64.547	43.961	5.707	1.00	43.44
ATOM C	2067	CA	PRO A 391	63.452	43.639	4.780	1.00	44.56
ATOM C	2068	C	PRO A 391	63.123	44.645	3.678	1.00	45.93

TABLE 7

ATOM	2069	O	PRO A 391	62.217	44.409	2.876	1.00	46.82
O								
ATOM	2070	CB	PRO A 391	62.273	43.423	5.722	1.00	44.41
C								
ATOM	2071	CG	PRO A 391	62.526	44.459	6.777	1.00	43.55
C								
ATOM	2072	CD	PRO A 391	64.018	44.320	7.036	1.00	42.66
C								
ATOM	2073	N	THR A 392	63.848	45.755	3.623	1.00	46.64
N								
ATOM	2074	CA	THR A 392	63.573	46.767	2.612	1.00	47.66
C								
ATOM	2075	C	THR A 392	64.258	46.479	1.282	1.00	49.02
C								
ATOM	2076	O	THR A 392	65.106	45.591	1.182	1.00	49.01
O								
ATOM	2077	CB	THR A 392	64.000	48.162	3.092	1.00	47.33
C								
ATOM	2078	OG1	THR A 392	65.419	48.188	3.286	1.00	47.34
O								
ATOM	2079	CG2	THR A 392	63.301	48.505	4.403	1.00	47.28
C								
ATOM	2080	N	ARG A 393	63.883	47.240	0.260	1.00	50.71
N								
ATOM	2081	CA	ARG A 393	64.456	47.061	-1.066	1.00	52.75
C								
ATOM	2082	C	ARG A 393	65.795	47.757	-1.219	1.00	53.23
C								
ATOM	2083	O	ARG A 393	65.993	48.876	-0.743	1.00	52.80
O								
ATOM	2084	CB	ARG A 393	63.513	47.595	-2.146	1.00	53.96
C								
ATOM	2085	CG	ARG A 393	62.189	46.865	-2.283	1.00	56.12
C								
ATOM	2086	CD	ARG A 393	61.493	47.344	-3.545	1.00	57.41
C								
ATOM	2087	NE	ARG A 393	61.452	48.802	-3.587	1.00	59.49
N								
ATOM	2088	CZ	ARG A 393	61.357	49.518	-4.702	1.00	60.61
C								
ATOM	2089	NH1	ARG A 393	61.291	48.913	-5.881	1.00	61.26
N								
ATOM	2090	NH2	ARG A 393	61.337	50.842	-4.636	1.00	61.38
N								
ATOM	2091	N	LYS A 394	66.713	47.077	-1.894	1.00	54.19
N								
ATOM	2092	CA	LYS A 394	68.031	47.621	-2.159	1.00	55.50
C								
ATOM	2093	C	LYS A 394	67.894	48.335	-3.497	1.00	56.45
C								
ATOM	2094	O	LYS A 394	67.683	47.692	-4.524	1.00	57.12
O								
ATOM	2095	CB	LYS A 394	69.053	46.492	-2.277	1.00	55.00
C								
ATOM	2096	CG	LYS A 394	70.490	46.968	-2.348	1.00	55.09
C								

TABLE 7

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ATOM	2097	CD	LYS A 394	71.417	45.863	-2.824	1.00	54.69
C								
ATOM	2098	CE	LYS A 394	71.338	44.636	-1.939	1.00	54.30
C								
ATOM	2099	NZ	LYS A 394	72.230	43.557	-2.442	1.00	53.86
N								
ATOM	2100	N	VAL A 395	67.993	49.659	-3.485	1.00	57.53
N								
ATOM	2101	CA	VAL A 395	67.860	50.432	-4.712	1.00	58.92
C								
ATOM	2102	C	VAL A 395	69.139	51.181	-5.061	1.00	60.04
C								
ATOM	2103	O	VAL A 395	69.813	51.718	-4.183	1.00	59.84
O								
ATOM	2104	CB	VAL A 395	66.704	51.448	-4.603	1.00	59.01
C								
ATOM	2105	CG1	VAL A 395	65.392	50.713	-4.362	1.00	58.97
C								
ATOM	2106	CG2	VAL A 395	66.977	52.433	-3.476	1.00	58.87
C								
ATOM	2107	N	THR A 396	69.467	51.213	-6.350	1.00	61.16
N								
ATOM	2108	CA	THR A 396	70.668	51.896	-6.818	1.00	62.32
C								
ATOM	2109	C	THR A 396	70.335	53.283	-7.351	1.00	63.18
C								
ATOM	2110	O	THR A 396	69.646	53.421	-8.363	1.00	63.24
O								
ATOM	2111	CB	THR A 396	71.367	51.099	-7.934	1.00	62.19
C								
ATOM	2112	OG1	THR A 396	71.668	49.780	-7.464	1.00	62.83
O								
ATOM	2113	CG2	THR A 396	72.662	51.785	-8.343	1.00	62.42
C								
ATOM	2114	N	ILE A 397	70.834	54.305	-6.665	1.00	64.15
N								
ATOM	2115	CA	ILE A 397	70.598	55.689	-7.055	1.00	65.10
C								
ATOM	2116	C	ILE A 397	71.899	56.356	-7.499	1.00	65.47
C								
ATOM	2117	O	ILE A 397	72.866	56.415	-6.741	1.00	65.96
O								
ATOM	2118	CB	ILE A 397	70.003	56.495	-5.884	1.00	65.41
C								
ATOM	2119	CG1	ILE A 397	68.709	55.833	-5.404	1.00	65.63
C								
ATOM	2120	CG2	ILE A 397	69.736	57.930	-6.320	1.00	65.84
C								
ATOM	2121	CD1	ILE A 397	68.079	56.509	-4.203	1.00	66.02
C								
ATOM	2122	N	ASN A 398	71.909	56.854	-8.732	1.00	65.71
N								
ATOM	2123	CA	ASN A 398	73.073	57.526	-9.307	1.00	65.41
C								
ATOM	2124	C	ASN A 398	74.417	56.895	-8.945	1.00	64.56
C								



TABLE 7

ATOM	2125	O	ASN A 398	75.353	57.592	-8.551	1.00	64.63
O								
ATOM	2126	CB	ASN A 398	73.079	59.008	-8.910	1.00	66.44
C								
ATOM	2127	CG	ASN A 398	73.115	59.215	-7.405	1.00	67.59
C								
ATOM	2128	OD1	ASN A 398	74.046	58.779	-6.725	1.00	68.20
O								
ATOM	2129	ND2	ASN A 398	72.099	59.891	-6.878	1.00	67.87
N								
ATOM	2130	N	GLY A 399	74.508	55.576	-9.082	1.00	63.47
N								
ATOM	2131	CA	GLY A 399	75.751	54.886	-8.779	1.00	61.85
C								
ATOM	2132	C	GLY A 399	75.918	54.443	-7.338	1.00	60.93
C								
ATOM	2133	O	GLY A 399	76.854	53.709	-7.016	1.00	61.23
O								
ATOM	2134	N	SER A 400	75.019	54.882	-6.464	1.00	59.70
N								
ATOM	2135	CA	SER A 400	75.096	54.511	-5.056	1.00	57.96
C								
ATOM	2136	C	SER A 400	73.973	53.577	-4.634	1.00	56.49
C								
ATOM	2137	O	SER A 400	72.793	53.898	-4.774	1.00	56.56
O								
ATOM	2138	CB	SER A 400	75.079	55.761	-4.174	1.00	57.95
C								
ATOM	2139	OG	SER A 400	76.286	56.488	-4.305	1.00	58.53
O								
ATOM	2140	N	VAL A 401	74.351	52.414	-4.118	1.00	54.54
N								
ATOM	2141	CA	VAL A 401	73.383	51.431	-3.662	1.00	52.89
C								
ATOM	2142	C	VAL A 401	72.864	51.864	-2.293	1.00	52.23
C								
ATOM	2143	O	VAL A 401	73.637	52.020	-1.344	1.00	51.54
O								
ATOM	2144	CB	VAL A 401	74.027	50.038	-3.550	1.00	52.97
C								
ATOM	2145	CG1	VAL A 401	72.986	49.012	-3.153	1.00	52.38
C								
ATOM	2146	CG2	VAL A 401	74.670	49.660	-4.876	1.00	52.77
C								
ATOM	2147	N	MET A 402	71.554	52.066	-2.201	1.00	50.74
N								
ATOM	2148	CA	MET A 402	70.933	52.493	-0.954	1.00	49.56
C								
ATOM	2149	C	MET A 402	69.878	51.490	-0.509	1.00	48.15
C								
ATOM	2150	O	MET A 402	69.533	50.563	-1.243	1.00	47.53
O								
ATOM	2151	CB	MET A 402	70.255	53.855	-1.138	1.00	50.70
C								
ATOM	2152	CG	MET A 402	71.080	54.897	-1.873	1.00	51.69
C								

TABLE 7

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ATOM	2153	SD	MET A 402	72.539	55.428	-0.974	1.00	54.36
S								
ATOM	2154	CE	MET A 402	71.840	56.729	0.054	1.00	52.69
C								
ATOM	2155	N	LYS A 403	69.380	51.683	0.708	1.00	45.93
N								
ATOM	2156	CA	LYS A 403	68.325	50.843	1.258	1.00	43.52
C								
ATOM	2157	C	LYS A 403	67.270	51.792	1.806	1.00	42.26
C								
ATOM	2158	O	LYS A 403	67.598	52.853	2.336	1.00	41.26
O								
ATOM	2159	CB	LYS A 403	68.856	49.937	2.373	1.00	43.98
C								
ATOM	2160	CG	LYS A 403	69.833	48.880	1.887	1.00	43.45
C								
ATOM	2161	CD	LYS A 403	69.570	47.521	2.524	1.00	43.42
C								
ATOM	2162	CE	LYS A 403	68.229	46.950	2.087	1.00	42.68
C								
ATOM	2163	NZ	LYS A 403	68.000	45.572	2.601	1.00	40.87
N								
ATOM	2164	N	GLU A 404	66.003	51.425	1.659	1.00	41.41
N								
ATOM	2165	CA	GLU A 404	64.927	52.275	2.144	1.00	41.08
C								
ATOM	2166	C	GLU A 404	64.881	52.222	3.661	1.00	39.67
C								
ATOM	2167	O	GLU A 404	65.181	51.192	4.265	1.00	38.02
O								
ATOM	2168	CB	GLU A 404	63.578	51.809	1.606	1.00	42.91
C								
ATOM	2169	CG	GLU A 404	63.610	51.221	0.214	1.00	46.16
C								
ATOM	2170	CD	GLU A 404	62.230	50.819	-0.252	1.00	47.92
C								
ATOM	2171	OE1	GLU A 404	61.469	51.711	-0.685	1.00	48.56
O								
ATOM	2172	OE2	GLU A 404	61.901	49.615	-0.167	1.00	49.37
O								
ATOM	2173	N	TYR A 405	64.496	53.335	4.271	1.00	38.76
N								
ATOM	2174	CA	TYR A 405	64.390	53.402	5.717	1.00	38.34
C								
ATOM	2175	C	TYR A 405	63.347	54.438	6.094	1.00	37.84
C								
ATOM	2176	O	TYR A 405	63.499	55.622	5.796	1.00	38.50
O								
ATOM	2177	CB	TYR A 405	65.736	53.770	6.344	1.00	37.72
C								
ATOM	2178	CG	TYR A 405	65.698	53.826	7.855	1.00	37.96
C								
ATOM	2179	CD1	TYR A 405	65.285	52.723	8.602	1.00	36.71
C								
ATOM	2180	CD2	TYR A 405	66.072	54.982	8.539	1.00	38.07
C								

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ATOM C	2181	CE1	TYR A 405	65.245	52.770	9.995	1.00	37.68
ATOM C	2182	CE2	TYR A 405	66.036	55.038	9.931	1.00	38.31
ATOM C	2183	CZ	TYR A 405	65.621	53.929	10.650	1.00	37.39
ATOM O	2184	OH	TYR A 405	65.577	53.987	12.024	1.00	38.38
ATOM N	2185	N	TRP A 406	62.287	53.986	6.752	1.00	36.25
ATOM C	2186	CA	TRP A 406	61.221	54.885	7.160	1.00	35.74
ATOM C	2187	C	TRP A 406	60.829	54.630	8.608	1.00	35.35
ATOM O	2188	O	TRP A 406	60.906	53.499	9.092	1.00	34.84
ATOM C	2189	CB	TRP A 406	60.013	54.712	6.226	1.00	34.90
ATOM C	2190	CG	TRP A 406	59.374	53.345	6.257	1.00	33.53
ATOM C	2191	CD1	TRP A 406	58.389	52.920	7.100	1.00	33.84
ATOM C	2192	CD2	TRP A 406	59.679	52.232	5.405	1.00	34.08
ATOM N	2193	NE1	TRP A 406	58.059	51.615	6.826	1.00	34.02
ATOM C	2194	CE2	TRP A 406	58.835	51.167	5.791	1.00	33.93
ATOM C	2195	CE3	TRP A 406	60.584	52.031	4.351	1.00	35.20
ATOM C	2196	CZ2	TRP A 406	58.866	49.916	5.160	1.00	34.01
ATOM C	2197	CZ3	TRP A 406	60.615	50.784	3.722	1.00	35.05
ATOM C	2198	CH2	TRP A 406	59.758	49.744	4.132	1.00	34.39
ATOM N	2199	N	GLY A 407	60.421	55.691	9.295	1.00	36.13
ATOM C	2200	CA	GLY A 407	60.023	55.569	10.685	1.00	36.66
ATOM C	2201	C	GLY A 407	58.630	54.991	10.840	1.00	37.56
ATOM O	2202	O	GLY A 407	57.835	54.989	9.899	1.00	36.82
ATOM N	2203	N	GLU A 408	58.331	54.495	12.035	1.00	37.65
ATOM C	2204	CA	GLU A 408	57.022	53.917	12.316	1.00	38.92
ATOM C	2205	C	GLU A 408	55.950	54.998	12.390	1.00	40.20
ATOM O	2206	O	GLU A 408	54.756	54.704	12.374	1.00	40.37
ATOM C	2207	CB	GLU A 408	57.071	53.141	13.631	1.00	38.51
ATOM C	2208	CG	GLU A 408	57.848	51.845	13.535	1.00	37.66

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ATOM	2209	CD	GLU A 408	57.167	50.834	12.625	1.00	37.31
C								
ATOM	2210	OE1	GLU A 408	56.048	50.392	12.960	1.00	37.35
O								
ATOM	2211	OE2	GLU A 408	57.748	50.482	11.578	1.00	35.96
O								
ATOM	2212	N	GLY A 409	56.387	56.249	12.464	1.00	41.46
N								
ATOM	2213	CA	GLY A 409	55.455	57.358	12.544	1.00	43.94
C								
ATOM	2214	C	GLY A 409	55.111	57.955	11.193	1.00	45.38
C								
ATOM	2215	O	GLY A 409	54.268	58.844	11.105	1.00	45.63
O								
ATOM	2216	N	SER A 410	55.762	57.473	10.138	1.00	46.93
N								
ATOM	2217	CA	SER A 410	55.499	57.977	8.795	1.00	48.89
C								
ATOM	2218	C	SER A 410	54.184	57.394	8.293	1.00	50.59
C								
ATOM	2219	O	SER A 410	53.798	56.292	8.683	1.00	49.70
O								
ATOM	2220	CB	SER A 410	56.633	57.587	7.840	1.00	48.74
C								
ATOM	2221	OG	SER A 410	56.645	56.189	7.595	1.00	49.10
O								
ATOM	2222	N	SER A 411	53.495	58.137	7.433	1.00	52.78
N								
ATOM	2223	CA	SER A 411	52.224	57.674	6.890	1.00	55.38
C								
ATOM	2224	C	SER A 411	52.436	56.350	6.172	1.00	56.75
C								
ATOM	2225	O	SER A 411	51.559	55.487	6.154	1.00	57.17
O								
ATOM	2226	CB	SER A 411	51.656	58.710	5.917	1.00	56.02
C								
ATOM	2227	OG	SER A 411	52.569	58.984	4.868	1.00	56.98
O								
ATOM	2228	N	ARG A 412	53.621	56.195	5.591	1.00	58.21
N								
ATOM	2229	CA	ARG A 412	53.976	54.985	4.862	1.00	59.73
C								
ATOM	2230	C	ARG A 412	53.968	53.730	5.735	1.00	60.68
C								
ATOM	2231	O	ARG A 412	54.038	52.616	5.217	1.00	60.45
O								
ATOM	2232	CB	ARG A 412	55.362	55.157	4.227	1.00	59.28
C								
ATOM	2233	CG	ARG A 412	55.870	53.925	3.502	1.00	59.26
C								
ATOM	2234	CD	ARG A 412	57.209	54.168	2.824	1.00	58.44
C								
ATOM	2235	NE	ARG A 412	57.669	52.964	2.141	1.00	57.93
N								
ATOM	2236	CZ	ARG A 412	58.797	52.874	1.445	1.00	57.94
C								

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ATOM N	2237	NH1	ARG	A	412	59.601	53.923	1.330	1.00	57.62
ATOM N	2238	NH2	ARG	A	412	59.120	51.727	0.863	1.00	58.08
ATOM N	2239	N	ALA	A	413	53.865	53.902	7.050	1.00	62.54
ATOM C	2240	CA	ALA	A	413	53.886	52.756	7.958	1.00	63.99
ATOM C	2241	C	ALA	A	413	52.735	52.638	8.956	1.00	65.55
ATOM O	2242	O	ALA	A	413	52.051	51.614	8.999	1.00	65.26
ATOM C	2243	CB	ALA	A	413	55.212	52.736	8.712	1.00	64.03
ATOM N	2244	N	ARG	A	414	52.533	53.676	9.764	1.00	67.81
ATOM C	2245	CA	ARG	A	414	51.489	53.671	10.789	1.00	69.46
ATOM C	2246	C	ARG	A	414	50.087	53.325	10.285	1.00	70.36
ATOM O	2247	O	ARG	A	414	49.181	53.071	11.084	1.00	70.13
ATOM C	2248	CB	ARG	A	414	51.446	55.026	11.509	1.00	70.05
ATOM C	2249	CG	ARG	A	414	50.960	56.194	10.659	1.00	71.62
ATOM C	2250	CD	ARG	A	414	50.711	57.418	11.534	1.00	73.27
ATOM N	2251	NE	ARG	A	414	50.149	58.551	10.799	1.00	74.95
ATOM C	2252	CZ	ARG	A	414	50.825	59.302	9.933	1.00	75.82
ATOM N	2253	NH1	ARG	A	414	52.102	59.047	9.682	1.00	76.36
ATOM N	2254	NH2	ARG	A	414	50.225	60.317	9.323	1.00	76.47
ATOM N	2255	N	ASN	A	415	49.911	53.313	8.967	1.00	71.18
ATOM C	2256	CA	ASN	A	415	48.617	53.001	8.364	1.00	72.52
ATOM C	2257	C	ASN	A	415	48.712	51.666	7.617	1.00	73.18
ATOM O	2258	O	ASN	A	415	48.989	51.638	6.416	1.00	73.46
ATOM C	2259	CB	ASN	A	415	48.218	54.124	7.393	1.00	73.28
ATOM C	2260	CG	ASN	A	415	46.759	54.059	6.982	1.00	73.50
ATOM O	2261	OD1	ASN	A	415	46.348	54.689	5.987	1.00	73.39
ATOM N	2262	ND2	ASN	A	415	45.957	53.314	7.742	1.00	73.08
ATOM N	2263	N	TRP	A	416	48.482	50.563	8.329	1.00	73.62
ATOM C	2264	CA	TRP	A	416	48.564	49.238	7.716	1.00	74.23

ATOM	2265	C	TRP A 416	47.212	48.527	7.660	1.00	73.85
C								
ATOM	2266	O	TRP A 416	46.416	48.598	8.598	1.00	73.60
O								
ATOM	2267	CB	TRP A 416	49.593	48.374	8.468	1.00	74.70
C								
ATOM	2268	CG	TRP A 416	49.043	47.556	9.609	1.00	76.10
C								
ATOM	2269	CD1	TRP A 416	48.308	46.405	9.516	1.00	76.57
C								
ATOM	2270	CD2	TRP A 416	49.195	47.819	11.010	1.00	76.67
C								
ATOM	2271	NE1	TRP A 416	47.996	45.936	10.770	1.00	76.56
N								
ATOM	2272	CE2	TRP A 416	48.527	46.784	11.705	1.00	76.89
C								
ATOM	2273	CE3	TRP A 416	49.830	48.828	11.747	1.00	77.37
C								
ATOM	2274	CZ2	TRP A 416	48.477	46.729	13.102	1.00	77.40
C								
ATOM	2275	CZ3	TRP A 416	49.780	48.772	13.138	1.00	77.75
C								
ATOM	2276	CH2	TRP A 416	49.107	47.728	13.799	1.00	77.84
C								
ATOM	2277	N	GLU A 431	54.545	62.823	11.142	1.00	66.75
N								
ATOM	2278	CA	GLU A 431	54.941	62.244	12.421	1.00	66.57
C								
ATOM	2279	C	GLU A 431	56.245	61.460	12.283	1.00	65.93
C								
ATOM	2280	O	GLU A 431	56.929	61.185	13.270	1.00	66.27
O								
ATOM	2281	CB	GLU A 431	53.832	61.328	12.945	1.00	67.44
C								
ATOM	2282	CG	GLU A 431	52.495	62.032	13.143	1.00	68.98
C								
ATOM	2283	CD	GLU A 431	51.422	61.112	13.693	1.00	69.90
C								
ATOM	2284	OE1	GLU A 431	51.073	60.126	13.010	1.00	70.49
O								
ATOM	2285	OE2	GLU A 431	50.927	61.373	14.811	1.00	70.56
O								
ATOM	2286	N	GLY A 432	56.582	61.106	11.047	1.00	64.87
N								
ATOM	2287	CA	GLY A 432	57.803	60.367	10.786	1.00	63.17
C								
ATOM	2288	C	GLY A 432	58.332	60.728	9.414	1.00	62.04
C								
ATOM	2289	O	GLY A 432	57.658	61.423	8.654	1.00	62.22
O								
ATOM	2290	N	VAL A 433	59.533	60.262	9.085	1.00	60.59
N								
ATOM	2291	CA	VAL A 433	60.117	60.564	7.785	1.00	58.60
C								
ATOM	2292	C	VAL A 433	60.530	59.318	7.000	1.00	57.08
C								

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ATOM O	2293	O	VAL A 433	60.849	58.276	7.576	1.00	56.04
ATOM C	2294	CB	VAL A 433	61.336	61.508	7.930	1.00	58.79
ATOM C	2295	CG1	VAL A 433	60.883	62.858	8.459	1.00	58.84
ATOM C	2296	CG2	VAL A 433	62.359	60.901	8.867	1.00	58.98
ATOM N	2297	N	ASP A 434	60.507	59.446	5.676	1.00	55.12
ATOM C	2298	CA	ASP A 434	60.867	58.367	4.761	1.00	53.00
ATOM C	2299	C	ASP A 434	62.215	58.734	4.144	1.00	51.90
ATOM O	2300	O	ASP A 434	62.401	59.866	3.696	1.00	51.71
ATOM C	2301	CB	ASP A 434	59.799	58.250	3.667	1.00	53.31
ATOM C	2302	CG	ASP A 434	59.932	56.984	2.841	1.00	53.22
ATOM O	2303	OD1	ASP A 434	59.210	56.862	1.830	1.00	53.79
ATOM O	2304	OD2	ASP A 434	60.744	56.108	3.199	1.00	53.37
ATOM N	2305	N	SER A 435	63.153	57.792	4.106	1.00	50.14
ATOM C	2306	CA	SER A 435	64.471	58.098	3.560	1.00	48.49
ATOM C	2307	C	SER A 435	65.267	56.912	3.026	1.00	47.19
ATOM O	2308	O	SER A 435	64.748	55.809	2.862	1.00	46.05
ATOM C	2309	CB	SER A 435	65.304	58.806	4.627	1.00	48.72
ATOM O	2310	OG	SER A 435	65.451	57.976	5.768	1.00	49.51
ATOM N	2311	N	TYR A 436	66.545	57.169	2.765	1.00	46.20
ATOM C	2312	CA	TYR A 436	67.470	56.163	2.259	1.00	46.22
ATOM C	2313	C	TYR A 436	68.735	56.149	3.114	1.00	45.31
ATOM O	2314	O	TYR A 436	69.125	57.175	3.673	1.00	45.33
ATOM C	2315	CB	TYR A 436	67.858	56.481	0.812	1.00	48.04
ATOM C	2316	CG	TYR A 436	66.731	56.356	-0.186	1.00	49.05
ATOM C	2317	CD1	TYR A 436	66.236	55.106	-0.555	1.00	49.71
ATOM C	2318	CD2	TYR A 436	66.160	57.488	-0.764	1.00	50.33
ATOM C	2319	CE1	TYR A 436	65.198	54.987	-1.476	1.00	50.76
ATOM C	2320	CE2	TYR A 436	65.119	57.381	-1.685	1.00	50.87

ATOM	2321	CZ	TYR A 436	64.645	56.129	-2.035	1.00	50.97
C								
ATOM	2322	OH	TYR A 436	63.614	56.019	-2.940	1.00	52.36
O								
ATOM	2323	N	VAL A 437	69.361	54.980	3.217	1.00	44.07
N								
ATOM	2324	CA	VAL A 437	70.602	54.824	3.970	1.00	43.32
C								
ATOM	2325	C	VAL A 437	71.591	54.068	3.092	1.00	42.81
C								
ATOM	2326	O	VAL A 437	71.218	53.132	2.384	1.00	41.76
O								
ATOM	2327	CB	VAL A 437	70.401	54.034	5.290	1.00	42.99
C								
ATOM	2328	CG1	VAL A 437	69.463	54.793	6.213	1.00	42.96
C								
ATOM	2329	CG2	VAL A 437	69.868	52.645	4.997	1.00	42.44
C								
ATOM	2330	N	PRO A 438	72.873	54.460	3.133	1.00	43.06
N								
ATOM	2331	CA	PRO A 438	73.882	53.784	2.313	1.00	42.54
C								
ATOM	2332	C	PRO A 438	73.998	52.295	2.611	1.00	41.85
C								
ATOM	2333	O	PRO A 438	74.038	51.883	3.770	1.00	41.55
O								
ATOM	2334	CB	PRO A 438	75.162	54.554	2.641	1.00	43.10
C								
ATOM	2335	CG	PRO A 438	74.943	54.958	4.067	1.00	44.10
C								
ATOM	2336	CD	PRO A 438	73.501	55.422	4.056	1.00	42.97
C								
ATOM	2337	N	TYR A 439	74.034	51.491	1.554	1.00	41.03
N								
ATOM	2338	CA	TYR A 439	74.162	50.046	1.686	1.00	40.53
C								
ATOM	2339	C	TYR A 439	75.502	49.754	2.356	1.00	40.67
C								
ATOM	2340	O	TYR A 439	76.530	50.308	1.968	1.00	39.93
O								
ATOM	2341	CB	TYR A 439	74.108	49.393	0.303	1.00	40.18
C								
ATOM	2342	CG	TYR A 439	74.244	47.889	0.305	1.00	39.32
C								
ATOM	2343	CD1	TYR A 439	73.339	47.086	0.998	1.00	40.13
C								
ATOM	2344	CD2	TYR A 439	75.264	47.263	-0.411	1.00	39.93
C								
ATOM	2345	CE1	TYR A 439	73.445	45.697	0.975	1.00	40.31
C								
ATOM	2346	CE2	TYR A 439	75.380	45.878	-0.439	1.00	39.98
C								
ATOM	2347	CZ	TYR A 439	74.467	45.102	0.254	1.00	40.61
C								
ATOM	2348	OH	TYR A 439	74.576	43.731	0.226	1.00	41.51
O								



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ATOM	2349	N	ALA A 440	75.485	48.885	3.361	1.00	40.76
N								
ATOM	2350	CA	ALA A 440	76.699	48.546	4.091	1.00	41.53
C								
ATOM	2351	C	ALA A 440	77.102	47.093	3.899	1.00	41.13
C								
ATOM	2352	O	ALA A 440	78.175	46.679	4.330	1.00	41.96
O								
ATOM	2353	CB	ALA A 440	76.507	48.842	5.580	1.00	40.70
C								
ATOM	2354	N	GLY A 441	76.239	46.320	3.251	1.00	41.41
N								
ATOM	2355	CA	GLY A 441	76.536	44.919	3.030	1.00	41.21
C								
ATOM	2356	C	GLY A 441	75.917	44.025	4.088	1.00	41.44
C								
ATOM	2357	O	GLY A 441	74.882	44.359	4.664	1.00	41.15
O								
ATOM	2358	N	LYS A 442	76.562	42.891	4.345	1.00	41.60
N								
ATOM	2359	CA	LYS A 442	76.097	41.917	5.329	1.00	41.97
C								
ATOM	2360	C	LYS A 442	76.237	42.410	6.771	1.00	40.70
C								
ATOM	2361	O	LYS A 442	77.189	43.112	7.114	1.00	41.12
O								
ATOM	2362	CB	LYS A 442	76.880	40.613	5.168	1.00	43.78
C								
ATOM	2363	CG	LYS A 442	76.859	40.049	3.756	1.00	46.44
C								
ATOM	2364	CD	LYS A 442	75.487	39.510	3.386	1.00	47.81
C								
ATOM	2365	CE	LYS A 442	75.159	38.260	4.179	1.00	48.88
C								
ATOM	2366	NZ	LYS A 442	73.844	37.682	3.783	1.00	51.00
N								
ATOM	2367	N	LEU A 443	75.285	42.020	7.611	1.00	39.20
N								
ATOM	2368	CA	LEU A 443	75.280	42.405	9.021	1.00	36.87
C								
ATOM	2369	C	LEU A 443	76.534	41.935	9.758	1.00	36.82
C								
ATOM	2370	O	LEU A 443	77.190	42.715	10.451	1.00	34.89
O								
ATOM	2371	CB	LEU A 443	74.032	41.829	9.703	1.00	35.37
C								
ATOM	2372	CG	LEU A 443	73.831	42.033	11.210	1.00	34.30
C								
ATOM	2373	CD1	LEU A 443	72.354	41.880	11.554	1.00	34.00
C								
ATOM	2374	CD2	LEU A 443	74.673	41.028	11.990	1.00	33.34
C								
ATOM	2375	N	LYS A 444	76.864	40.660	9.593	1.00	36.78
N								
ATOM	2376	CA	LYS A 444	78.016	40.052	10.256	1.00	37.95
C								

TABLE 7

ATOM	2377	C	LYS A 444	79.303	40.880	10.292	1.00	37.79
C								
ATOM	2378	O	LYS A 444	79.801	41.211	11.371	1.00	36.54
O								
ATOM	2379	CB	LYS A 444	78.318	38.687	9.629	1.00	39.41
C								
ATOM	2380	CG	LYS A 444	79.374	37.896	10.380	1.00	43.18
C								
ATOM	2381	CD	LYS A 444	79.656	36.560	9.716	1.00	45.77
C								
ATOM	2382	CE	LYS A 444	80.661	35.762	10.527	1.00	47.73
C								
ATOM	2383	NZ	LYS A 444	81.910	36.539	10.764	1.00	49.70
N								
ATOM	2384	N	ASP A 445	79.839	41.207	9.120	1.00	37.04
N								
ATOM	2385	CA	ASP A 445	81.086	41.965	9.023	1.00	37.29
C								
ATOM	2386	C	ASP A 445	81.040	43.353	9.645	1.00	35.93
C								
ATOM	2387	O	ASP A 445	82.032	43.819	10.208	1.00	34.89
O								
ATOM	2388	CB	ASP A 445	81.512	42.095	7.558	1.00	39.90
C								
ATOM	2389	CG	ASP A 445	81.673	40.750	6.876	1.00	42.77
C								
ATOM	2390	OD1	ASP A 445	82.442	39.906	7.389	1.00	43.80
O								
ATOM	2391	OD2	ASP A 445	81.025	40.541	5.827	1.00	45.60
O								
ATOM	2392	N	ASN A 446	79.897	44.020	9.525	1.00	33.98
N								
ATOM	2393	CA	ASN A 446	79.739	45.359	10.075	1.00	33.10
C								
ATOM	2394	C	ASN A 446	79.657	45.330	11.596	1.00	31.88
C								
ATOM	2395	O	ASN A 446	80.257	46.167	12.272	1.00	30.91
O								
ATOM	2396	CB	ASN A 446	78.489	46.016	9.493	1.00	33.95
C								
ATOM	2397	CG	ASN A 446	78.683	46.454	8.051	1.00	35.61
C								
ATOM	2398	OD1	ASN A 446	79.267	47.505	7.785	1.00	37.12
O								
ATOM	2399	ND2	ASN A 446	78.207	45.641	7.116	1.00	34.41
N								
ATOM	2400	N	VAL A 447	78.911	44.371	12.131	1.00	31.04
N								
ATOM	2401	CA	VAL A 447	78.776	44.244	13.576	1.00	31.31
C								
ATOM	2402	C	VAL A 447	80.130	43.896	14.195	1.00	32.24
C								
ATOM	2403	O	VAL A 447	80.503	44.444	15.228	1.00	32.11
O								
ATOM	2404	CB	VAL A 447	77.740	43.160	13.949	1.00	30.45
C								

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ATOM C	2405	CG1	VAL	A	447	77.813	42.858	15.443	1.00	30.61
ATOM C	2406	CG2	VAL	A	447	76.336	43.642	13.587	1.00	30.05
ATOM N	2407	N	GLU	A	448	80.863	42.988	13.559	1.00	32.57
ATOM C	2408	CA	GLU	A	448	82.178	42.594	14.061	1.00	33.80
ATOM C	2409	C	GLU	A	448	83.095	43.819	14.130	1.00	32.73
ATOM O	2410	O	GLU	A	448	83.794	44.029	15.125	1.00	31.37
ATOM C	2411	CB	GLU	A	448	82.798	41.529	13.148	1.00	37.00
ATOM C	2412	CG	GLU	A	448	84.116	40.945	13.658	1.00	41.15
ATOM C	2413	CD	GLU	A	448	84.710	39.904	12.714	1.00	44.90
ATOM O	2414	OE1	GLU	A	448	85.161	40.280	11.610	1.00	47.11
ATOM O	2415	OE2	GLU	A	448	84.720	38.705	13.075	1.00	47.09
ATOM N	2416	N	ALA	A	449	83.086	44.630	13.076	1.00	31.13
ATOM C	2417	CA	ALA	A	449	83.918	45.829	13.034	1.00	31.18
ATOM C	2418	C	ALA	A	449	83.528	46.810	14.137	1.00	30.71
ATOM O	2419	O	ALA	A	449	84.385	47.323	14.854	1.00	29.77
ATOM C	2420	CB	ALA	A	449	83.802	46.506	11.674	1.00	31.83
ATOM N	2421	N	SER	A	450	82.232	47.068	14.269	1.00	29.54
ATOM C	2422	CA	SER	A	450	81.747	47.990	15.289	1.00	30.17
ATOM C	2423	C	SER	A	450	82.130	47.528	16.694	1.00	30.40
ATOM O	2424	O	SER	A	450	82.690	48.298	17.477	1.00	29.79
ATOM C	2425	CB	SER	A	450	80.220	48.126	15.208	1.00	29.18
ATOM O	2426	OG	SER	A	450	79.822	48.804	14.031	1.00	29.75
ATOM N	2427	N	LEU	A	451	81.832	46.269	17.006	1.00	29.78
ATOM C	2428	CA	LEU	A	451	82.123	45.734	18.330	1.00	30.57
ATOM C	2429	C	LEU	A	451	83.614	45.586	18.620	1.00	31.46
ATOM O	2430	O	LEU	A	451	84.022	45.603	19.781	1.00	30.55
ATOM C	2431	CB	LEU	A	451	81.389	44.406	18.538	1.00	30.40
ATOM C	2432	CG	LEU	A	451	79.858	44.540	18.505	1.00	30.16

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ATOM C	2433	CD1	LEU A 451	79.219	43.219	18.883	1.00	30.36
ATOM C	2434	CD2	LEU A 451	79.409	45.640	19.466	1.00	30.38
ATOM N	2435	N	ASN A 452	84.430	45.440	17.580	1.00	32.01
ATOM C	2436	CA	ASN A 452	85.869	45.344	17.800	1.00	33.62
ATOM C	2437	C	ASN A 452	86.349	46.699	18.319	1.00	33.02
ATOM O	2438	O	ASN A 452	87.226	46.771	19.181	1.00	32.70
ATOM C	2439	CB	ASN A 452	86.615	44.988	16.510	1.00	35.58
ATOM C	2440	CG	ASN A 452	86.569	43.505	16.201	1.00	39.03
ATOM O	2441	OD1	ASN A 452	86.531	42.669	17.109	1.00	41.67
ATOM N	2442	ND2	ASN A 452	86.595	43.167	14.916	1.00	41.46
ATOM N	2443	N	LYS A 453	85.761	47.772	17.795	1.00	32.33
ATOM C	2444	CA	LYS A 453	86.125	49.115	18.225	1.00	32.17
ATOM C	2445	C	LYS A 453	85.642	49.343	19.655	1.00	30.92
ATOM O	2446	O	LYS A 453	86.344	49.949	20.459	1.00	29.86
ATOM C	2447	CB	LYS A 453	85.528	50.161	17.278	1.00	33.56
ATOM C	2448	CG	LYS A 453	86.172	50.131	15.889	1.00	37.25
ATOM C	2449	CD	LYS A 453	85.461	51.033	14.892	1.00	37.79
ATOM C	2450	CE	LYS A 453	85.502	52.490	15.316	1.00	39.41
ATOM N	2451	NZ	LYS A 453	84.804	53.342	14.314	1.00	40.64
ATOM N	2452	N	VAL A 454	84.447	48.849	19.966	1.00	29.21
ATOM C	2453	CA	VAL A 454	83.900	48.981	21.311	1.00	28.29
ATOM C	2454	C	VAL A 454	84.827	48.253	22.290	1.00	29.16
ATOM O	2455	O	VAL A 454	85.196	48.801	23.330	1.00	27.96
ATOM C	2456	CB	VAL A 454	82.478	48.368	21.408	1.00	28.44
ATOM C	2457	CG1	VAL A 454	82.016	48.334	22.867	1.00	26.28
ATOM C	2458	CG2	VAL A 454	81.499	49.188	20.571	1.00	27.61
ATOM N	2459	N	LYS A 455	85.209	47.024	21.945	1.00	28.54
ATOM C	2460	CA	LYS A 455	86.092	46.229	22.801	1.00	29.86

ATOM	2461	C	LYS A 455	87.443	46.901	23.011	1.00	29.20
C								
ATOM	2462	O	LYS A 455	87.990	46.887	24.114	1.00	28.77
O								
ATOM	2463	CB	LYS A 455	86.322	44.838	22.202	1.00	30.13
C								
ATOM	2464	CG	LYS A 455	85.109	43.927	22.179	1.00	32.41
C								
ATOM	2465	CD	LYS A 455	85.465	42.639	21.447	1.00	34.53
C								
ATOM	2466	CE	LYS A 455	84.273	41.723	21.273	1.00	37.13
C								
ATOM	2467	NZ	LYS A 455	84.641	40.530	20.457	1.00	38.19
N								
ATOM	2468	N	SER A 456	87.985	47.483	21.946	1.00	29.06
N								
ATOM	2469	CA	SER A 456	89.271	48.152	22.036	1.00	30.21
C								
ATOM	2470	C	SER A 456	89.173	49.345	22.988	1.00	29.49
C								
ATOM	2471	O	SER A 456	90.051	49.565	23.823	1.00	28.06
O								
ATOM	2472	CB	SER A 456	89.722	48.617	20.650	1.00	31.84
C								
ATOM	2473	OG	SER A 456	91.050	49.100	20.703	1.00	36.19
O								
ATOM	2474	N	THR A 457	88.090	50.106	22.863	1.00	27.42
N								
ATOM	2475	CA	THR A 457	87.872	51.265	23.717	1.00	27.12
C								
ATOM	2476	C	THR A 457	87.689	50.822	25.163	1.00	26.61
C								
ATOM	2477	O	THR A 457	88.174	51.476	26.087	1.00	26.73
O								
ATOM	2478	CB	THR A 457	86.636	52.051	23.254	1.00	27.39
C								
ATOM	2479	OG1	THR A 457	86.833	52.456	21.897	1.00	29.71
O								
ATOM	2480	CG2	THR A 457	86.416	53.278	24.121	1.00	25.69
C								
ATOM	2481	N	MET A 458	86.993	49.706	25.362	1.00	25.76
N								
ATOM	2482	CA	MET A 458	86.791	49.197	26.708	1.00	25.74
C								
ATOM	2483	C	MET A 458	88.145	48.903	27.349	1.00	26.35
C								
ATOM	2484	O	MET A 458	88.373	49.229	28.518	1.00	24.96
O								
ATOM	2485	CB	MET A 458	85.900	47.954	26.670	1.00	25.80
C								
ATOM	2486	CG	MET A 458	84.427	48.318	26.457	1.00	25.05
C								
ATOM	2487	SD	MET A 458	83.363	46.907	26.197	1.00	26.75
S								
ATOM	2488	CE	MET A 458	83.422	46.109	27.816	1.00	25.98
C								

TABLE 7

ATOM N	2489	N	CYS A 459	89.061	48.320	26.582	1.00	26.54
ATOM C	2490	CA	CYS A 459	90.388	48.043	27.124	1.00	28.58
ATOM C	2491	C	CYS A 459	91.144	49.331	27.465	1.00	27.83
ATOM O	2492	O	CYS A 459	91.932	49.357	28.414	1.00	27.16
ATOM C	2493	CB	CYS A 459	91.201	47.183	26.159	1.00	31.43
ATOM S	2494	SG	CYS A 459	90.785	45.417	26.328	1.00	37.59
ATOM N	2495	N	ASN A 460	90.913	50.393	26.696	1.00	27.31
ATOM C	2496	CA	ASN A 460	91.554	51.678	26.978	1.00	26.88
ATOM C	2497	C	ASN A 460	91.053	52.139	28.347	1.00	27.10
ATOM O	2498	O	ASN A 460	91.792	52.748	29.122	1.00	25.93
ATOM C	2499	CB	ASN A 460	91.168	52.744	25.942	1.00	27.20
ATOM C	2500	CG	ASN A 460	91.839	52.542	24.595	1.00	30.02
ATOM O	2501	OD1	ASN A 460	91.164	52.420	23.572	1.00	29.71
ATOM N	2502	ND2	ASN A 460	93.170	52.524	24.583	1.00	29.98
ATOM N	2503	N	CYS A 461	89.786	51.847	28.631	1.00	26.43
ATOM C	2504	CA	CYS A 461	89.162	52.233	29.891	1.00	26.78
ATOM C	2505	C	CYS A 461	89.394	51.232	31.024	1.00	26.46
ATOM O	2506	O	CYS A 461	88.900	51.426	32.134	1.00	27.65
ATOM C	2507	CB	CYS A 461	87.654	52.436	29.682	1.00	26.90
ATOM S	2508	SG	CYS A 461	87.253	53.712	28.445	1.00	29.55
ATOM N	2509	N	GLY A 462	90.139	50.168	30.739	1.00	26.72
ATOM C	2510	CA	GLY A 462	90.430	49.155	31.745	1.00	28.25
ATOM C	2511	C	GLY A 462	89.272	48.226	32.081	1.00	28.51
ATOM O	2512	O	GLY A 462	89.174	47.712	33.204	1.00	28.75
ATOM N	2513	N	ALA A 463	88.405	47.979	31.106	1.00	26.73
ATOM C	2514	CA	ALA A 463	87.239	47.136	31.335	1.00	26.80
ATOM C	2515	C	ALA A 463	87.198	45.909	30.435	1.00	27.34
ATOM O	2516	O	ALA A 463	87.350	46.018	29.218	1.00	27.58

TABLE 7

ATOM C	2517	CB	ALA A 463	85.967	47.963	31.140	1.00	26.04
ATOM N	2518	N	LEU A 464	86.983	44.746	31.045	1.00	26.85
ATOM C	2519	CA	LEU A 464	86.896	43.489	30.308	1.00	27.73
ATOM C	2520	C	LEU A 464	85.447	43.057	30.121	1.00	26.69
ATOM O	2521	O	LEU A 464	85.169	42.119	29.379	1.00	27.47
ATOM C	2522	CB	LEU A 464	87.654	42.378	31.038	1.00	28.53
ATOM C	2523	CG	LEU A 464	89.176	42.386	30.902	1.00	31.51
ATOM C	2524	CD1	LEU A 464	89.777	41.251	31.734	1.00	32.32
ATOM C	2525	CD2	LEU A 464	89.545	42.218	29.442	1.00	31.92
ATOM N	2526	N	THR A 465	84.531	43.734	30.806	1.00	25.40
ATOM C	2527	CA	THR A 465	83.108	43.421	30.709	1.00	24.59
ATOM C	2528	C	THR A 465	82.320	44.716	30.749	1.00	24.19
ATOM O	2529	O	THR A 465	82.855	45.766	31.102	1.00	22.83
ATOM C	2530	CB	THR A 465	82.617	42.552	31.884	1.00	24.77
ATOM O	2531	OG1	THR A 465	82.633	43.331	33.088	1.00	24.88
ATOM C	2532	CG2	THR A 465	83.507	41.317	32.061	1.00	24.23
ATOM N	2533	N	ILE A 466	81.040	44.639	30.401	1.00	23.48
ATOM C	2534	CA	ILE A 466	80.200	45.825	30.410	1.00	22.77
ATOM C	2535	C	ILE A 466	80.004	46.343	31.839	1.00	23.62
ATOM O	2536	O	ILE A 466	80.103	47.545	32.082	1.00	22.96
ATOM C	2537	CB	ILE A 466	78.849	45.538	29.699	1.00	23.94
ATOM C	2538	CG1	ILE A 466	79.113	45.363	28.194	1.00	22.77
ATOM C	2539	CG2	ILE A 466	77.856	46.679	29.935	1.00	23.50
ATOM C	2540	CD1	ILE A 466	77.886	44.941	27.377	1.00	24.77
ATOM N	2541	N	PRO A 467	79.742	45.448	32.809	1.00	23.36
ATOM C	2542	CA	PRO A 467	79.563	45.945	34.176	1.00	24.01
ATOM C	2543	C	PRO A 467	80.826	46.648	34.676	1.00	24.80
ATOM O	2544	O	PRO A 467	80.753	47.640	35.399	1.00	24.96

ATOM	2545	CB	PRO A 467	79.253	44.676	34.965	1.00	24.77
C								
ATOM	2546	CG	PRO A 467	78.516	43.843	33.954	1.00	24.81
C								
ATOM	2547	CD	PRO A 467	79.367	44.024	32.720	1.00	23.03
C								
ATOM	2548	N	GLN A 468	81.988	46.136	34.287	1.00	25.14
N								
ATOM	2549	CA	GLN A 468	83.233	46.754	34.713	1.00	26.45
C								
ATOM	2550	C	GLN A 468	83.394	48.121	34.042	1.00	25.99
C								
ATOM	2551	O	GLN A 468	83.909	49.062	34.650	1.00	26.63
O								
ATOM	2552	CB	GLN A 468	84.412	45.829	34.398	1.00	27.40
C								
ATOM	2553	CG	GLN A 468	85.759	46.390	34.791	1.00	29.99
C								
ATOM	2554	CD	GLN A 468	86.838	45.328	34.836	1.00	28.82
C								
ATOM	2555	OE1	GLN A 468	86.952	44.501	33.934	1.00	27.62
O								
ATOM	2556	NE2	GLN A 468	87.648	45.356	35.890	1.00	30.42
N								
ATOM	2557	N	LEU A 469	82.940	48.238	32.796	1.00	24.88
N								
ATOM	2558	CA	LEU A 469	83.014	49.507	32.081	1.00	24.40
C								
ATOM	2559	C	LEU A 469	82.093	50.527	32.753	1.00	24.98
C								
ATOM	2560	O	LEU A 469	82.447	51.702	32.898	1.00	25.34
O								
ATOM	2561	CB	LEU A 469	82.596	49.332	30.611	1.00	24.62
C								
ATOM	2562	CG	LEU A 469	82.396	50.625	29.799	1.00	24.32
C								
ATOM	2563	CD1	LEU A 469	83.731	51.286	29.507	1.00	24.10
C								
ATOM	2564	CD2	LEU A 469	81.681	50.298	28.497	1.00	23.72
C								
ATOM	2565	N	GLN A 470	80.914	50.077	33.168	1.00	24.91
N								
ATOM	2566	CA	GLN A 470	79.951	50.965	33.807	1.00	26.70
C								
ATOM	2567	C	GLN A 470	80.461	51.471	35.151	1.00	27.35
C								
ATOM	2568	O	GLN A 470	80.103	52.560	35.601	1.00	28.25
O								
ATOM	2569	CB	GLN A 470	78.614	50.238	33.961	1.00	27.04
C								
ATOM	2570	CG	GLN A 470	78.071	49.794	32.600	1.00	26.67
C								
ATOM	2571	CD	GLN A 470	76.805	48.981	32.688	1.00	27.02
C								
ATOM	2572	OE1	GLN A 470	76.616	48.208	33.621	1.00	28.25
O								



TABLE 7

ATOM N	2573	NE2	GLN A 470	75.934	49.135	31.696	1.00	25.90
ATOM N	2574	N	SER A 471	81.316	50.680	35.778	1.00	26.97
ATOM C	2575	CA	SER A 471	81.883	51.049	37.063	1.00	28.68
ATOM C	2576	C	SER A 471	83.122	51.944	36.928	1.00	28.52
ATOM O	2577	O	SER A 471	83.289	52.908	37.680	1.00	29.15
ATOM C	2578	CB	SER A 471	82.244	49.775	37.839	1.00	29.10
ATOM O	2579	OG	SER A 471	82.934	50.081	39.037	1.00	35.37
ATOM N	2580	N	LYS A 472	83.968	51.651	35.946	1.00	27.16
ATOM C	2581	CA	LYS A 472	85.224	52.390	35.782	1.00	28.51
ATOM C	2582	C	LYS A 472	85.293	53.531	34.778	1.00	27.51
ATOM O	2583	O	LYS A 472	86.232	54.323	34.818	1.00	26.25
ATOM C	2584	CB	LYS A 472	86.341	51.404	35.451	1.00	29.64
ATOM C	2585	CG	LYS A 472	86.461	50.273	36.453	1.00	32.63
ATOM C	2586	CD	LYS A 472	87.440	49.205	35.994	1.00	33.81
ATOM C	2587	CE	LYS A 472	88.868	49.704	35.997	1.00	35.59
ATOM N	2588	NZ	LYS A 472	89.815	48.590	35.715	1.00	35.49
ATOM N	2589	N	ALA A 473	84.322	53.617	33.876	1.00	26.09
ATOM C	2590	CA	ALA A 473	84.345	54.660	32.860	1.00	26.12
ATOM C	2591	C	ALA A 473	84.461	56.080	33.410	1.00	25.21
ATOM O	2592	O	ALA A 473	83.827	56.432	34.400	1.00	25.99
ATOM C	2593	CB	ALA A 473	83.106	54.553	31.971	1.00	26.24
ATOM N	2594	N	LYS A 474	85.290	56.882	32.749	1.00	24.98
ATOM C	2595	CA	LYS A 474	85.505	58.284	33.098	1.00	25.10
ATOM C	2596	C	LYS A 474	84.943	59.013	31.884	1.00	24.93
ATOM O	2597	O	LYS A 474	85.475	58.904	30.779	1.00	24.89
ATOM C	2598	CB	LYS A 474	87.000	58.549	33.278	1.00	25.31
ATOM C	2599	CG	LYS A 474	87.589	57.732	34.424	1.00	25.41
ATOM C	2600	CD	LYS A 474	89.078	57.470	34.242	1.00	26.81

TABLE 7

ATOM C	2601	CE	LYS A 474	89.902	58.722	34.425	1.00	28.30
ATOM N	2602	NZ	LYS A 474	91.346	58.422	34.183	1.00	27.67
ATOM N	2603	N	ILE A 475	83.858	59.750	32.093	1.00	24.28
ATOM C	2604	CA	ILE A 475	83.169	60.408	30.986	1.00	25.91
ATOM C	2605	C	ILE A 475	83.103	61.924	31.100	1.00	25.77
ATOM O	2606	O	ILE A 475	82.519	62.453	32.042	1.00	26.40
ATOM C	2607	CB	ILE A 475	81.726	59.855	30.883	1.00	25.54
ATOM C	2608	CG1	ILE A 475	81.763	58.319	30.868	1.00	26.29
ATOM C	2609	CG2	ILE A 475	81.043	60.392	29.630	1.00	27.31
ATOM C	2610	CD1	ILE A 475	80.394	57.657	30.959	1.00	25.53
ATOM N	2611	N	THR A 476	83.678	62.617	30.122	1.00	25.85
ATOM C	2612	CA	THR A 476	83.675	64.073	30.140	1.00	25.82
ATOM C	2613	C	THR A 476	82.795	64.688	29.067	1.00	25.93
ATOM O	2614	O	THR A 476	82.630	64.137	27.977	1.00	24.07
ATOM C	2615	CB	THR A 476	85.097	64.657	29.955	1.00	26.37
ATOM O	2616	OG1	THR A 476	85.052	66.082	30.123	1.00	28.03
ATOM C	2617	CG2	THR A 476	85.625	64.352	28.559	1.00	25.51
ATOM N	2618	N	LEU A 477	82.232	65.843	29.399	1.00	25.92
ATOM C	2619	CA	LEU A 477	81.406	66.596	28.472	1.00	27.45
ATOM C	2620	C	LEU A 477	82.433	67.442	27.722	1.00	27.85
ATOM O	2621	O	LEU A 477	83.469	67.780	28.290	1.00	27.59
ATOM C	2622	CB	LEU A 477	80.454	67.501	29.254	1.00	28.30
ATOM C	2623	CG	LEU A 477	79.298	68.176	28.523	1.00	30.46
ATOM C	2624	CD1	LEU A 477	78.351	67.123	27.980	1.00	29.78
ATOM C	2625	CD2	LEU A 477	78.561	69.099	29.497	1.00	32.80
ATOM N	2626	N	VAL A 478	82.167	67.771	26.462	1.00	29.07
ATOM C	2627	CA	VAL A 478	83.095	68.592	25.686	1.00	31.32
ATOM C	2628	C	VAL A 478	82.456	69.950	25.407	1.00	33.58

TABLE 7

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ATOM O	2629	O	VAL A 478	81.248	70.044	25.212	1.00	32.21
ATOM C	2630	CB	VAL A 478	83.480	67.912	24.348	1.00	32.07
ATOM C	2631	CG1	VAL A 478	83.857	66.462	24.604	1.00	32.68
ATOM C	2632	CG2	VAL A 478	82.342	68.018	23.341	1.00	34.67
ATOM N	2633	N	SER A 479	83.274	70.997	25.385	1.00	35.26
ATOM C	2634	CA	SER A 479	82.791	72.359	25.169	1.00	38.88
ATOM C	2635	C	SER A 479	81.991	72.592	23.899	1.00	41.66
ATOM O	2636	O	SER A 479	82.255	71.993	22.854	1.00	42.05
ATOM C	2637	CB	SER A 479	83.963	73.339	25.174	1.00	38.14
ATOM O	2638	OG	SER A 479	84.773	73.130	24.034	1.00	36.16
ATOM N	2639	N	SER A 480	81.019	73.494	24.004	1.00	45.75
ATOM C	2640	CA	SER A 480	80.169	73.865	22.881	1.00	50.07
ATOM C	2641	C	SER A 480	81.035	74.534	21.819	1.00	52.24
ATOM O	2642	O	SER A 480	80.834	74.346	20.617	1.00	51.90
ATOM C	2643	CB	SER A 480	79.085	74.842	23.351	1.00	50.84
ATOM O	2644	OG	SER A 480	78.323	75.323	22.258	1.00	52.94
ATOM N	2645	N	VAL A 481	82.015	75.301	22.288	1.00	54.50
ATOM C	2646	CA	VAL A 481	82.929	76.029	21.416	1.00	56.91
ATOM C	2647	C	VAL A 481	84.004	75.136	20.803	1.00	58.08
ATOM O	2648	O	VAL A 481	84.966	75.637	20.216	1.00	58.99
ATOM C	2649	CB	VAL A 481	83.641	77.154	22.193	1.00	57.54
ATOM C	2650	CG1	VAL A 481	83.948	78.316	21.264	1.00	57.89
ATOM C	2651	CG2	VAL A 481	82.789	77.596	23.366	1.00	58.34
ATOM N	2652	N	SER A 482	83.848	73.821	20.933	1.00	58.75
ATOM C	2653	CA	SER A 482	84.838	72.896	20.393	1.00	59.46
ATOM C	2654	C	SER A 482	84.252	71.737	19.593	1.00	60.06
ATOM O	2655	O	SER A 482	83.245	71.896	18.902	1.00	60.14
ATOM C	2656	CB	SER A 482	85.708	72.345	21.525	1.00	59.32

TABLE 7

ATOM O	2657	OG	SER A 482	86.717	71.486	21.025	1.00	60.01
ATOM N	2658	N	ILE A 483	84.899	70.575	19.712	1.00	60.52
ATOM C	2659	CA	ILE A 483	84.535	69.343	19.009	1.00	60.59
ATOM C	2660	C	ILE A 483	85.319	69.317	17.701	1.00	60.24
ATOM O	2661	O	ILE A 483	85.585	68.254	17.137	1.00	60.22
ATOM C	2662	CB	ILE A 483	83.015	69.264	18.698	1.00	60.93
ATOM C	2663	CG1	ILE A 483	82.227	69.079	19.997	1.00	60.99
ATOM C	2664	CG2	ILE A 483	82.730	68.118	17.731	1.00	61.21
ATOM C	2665	CD1	ILE A 483	80.725	69.039	19.804	1.00	60.52
ATOM N	2666	N	VAL A 484	85.694	70.504	17.237	1.00	59.84
ATOM C	2667	CA	VAL A 484	86.451	70.653	16.001	1.00	59.29
ATOM C	2668	C	VAL A 484	87.845	70.049	16.151	1.00	58.69
ATOM O	2669	O	VAL A 484	88.354	69.409	15.228	1.00	58.32
ATOM C	2670	CB	VAL A 484	86.590	72.145	15.612	1.00	59.56
ATOM C	2671	CG1	VAL A 484	87.372	72.277	14.311	1.00	59.65
ATOM C	2672	CG2	VAL A 484	85.209	72.775	15.469	1.00	59.42
ATOM N	2673	N	GLU A 485	88.456	70.254	17.316	1.00	57.53
ATOM C	2674	CA	GLU A 485	89.790	69.725	17.584	1.00	56.68
ATOM C	2675	C	GLU A 485	89.765	68.200	17.523	1.00	57.27
ATOM O	2676	O	GLU A 485	90.758	67.565	17.164	1.00	56.78
ATOM C	2677	CB	GLU A 485	90.277	70.170	18.969	1.00	54.83
ATOM C	2678	CG	GLU A 485	91.732	69.794	19.274	1.00	52.09
ATOM C	2679	CD	GLU A 485	92.168	70.183	20.682	1.00	50.97
ATOM O	2680	OE1	GLU A 485	91.768	69.499	21.649	1.00	45.34
ATOM O	2681	OE2	GLU A 485	92.911	71.180	20.820	1.00	51.44
ATOM N	2682	N	GLY A 486	88.617	67.626	17.872	1.00	57.81
ATOM C	2683	CA	GLY A 486	88.462	66.182	17.875	1.00	58.97
ATOM C	2684	C	GLY A 486	88.580	65.524	16.515	1.00	59.51

TABLE 7

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ATOM	2685	O	GLY A 486	89.142	64.435	16.398	1.00	59.72
O								
ATOM	2686	N	GLY A 487	88.045	66.176	15.487	1.00	60.19
N								
ATOM	2687	CA	GLY A 487	88.118	65.620	14.146	1.00	60.96
C								
ATOM	2688	C	GLY A 487	89.336	66.120	13.394	1.00	61.44
C								
ATOM	2689	O	GLY A 487	90.170	66.831	13.957	1.00	61.56
O								
ATOM	2690	N	ALA A 488	89.450	65.746	12.123	1.00	61.60
N								
ATOM	2691	CA	ALA A 488	90.576	66.180	11.302	1.00	61.84
C								
ATOM	2692	C	ALA A 488	90.446	67.683	11.068	1.00	62.10
C								
ATOM	2693	O	ALA A 488	89.365	68.171	10.739	1.00	61.91
O								
ATOM	2694	CB	ALA A 488	90.575	65.434	9.971	1.00	61.64
C								
ATOM	2695	N	HIS A 489	91.541	68.417	11.240	1.00	62.27
N								
ATOM	2696	CA	HIS A 489	91.499	69.863	11.049	1.00	62.65
C								
ATOM	2697	C	HIS A 489	92.786	70.469	10.503	1.00	62.69
C								
ATOM	2698	O	HIS A 489	93.887	70.008	10.809	1.00	62.31
O								
ATOM	2699	CB	HIS A 489	91.147	70.559	12.368	1.00	62.91
C								
ATOM	2700	CG	HIS A 489	92.100	70.258	13.484	1.00	63.07
C								
ATOM	2701	ND1	HIS A 489	92.136	69.038	14.124	1.00	63.07
N								
ATOM	2702	CD2	HIS A 489	93.060	71.016	14.066	1.00	63.14
C								
ATOM	2703	CE1	HIS A 489	93.074	69.058	15.054	1.00	63.28
C								
ATOM	2704	NE2	HIS A 489	93.650	70.246	15.039	1.00	63.10
N								
ATOM	2705	N	ASP A 490	92.626	71.513	9.695	1.00	62.96
N								
ATOM	2706	CA	ASP A 490	93.747	72.234	9.101	1.00	62.99
C								
ATOM	2707	C	ASP A 490	94.619	71.381	8.187	1.00	63.25
C								
ATOM	2708	O	ASP A 490	95.824	71.609	8.066	1.00	62.96
O								
ATOM	2709	CB	ASP A 490	94.593	72.857	10.210	1.00	63.04
C								
ATOM	2710	CG	ASP A 490	93.789	73.797	11.086	1.00	63.29
C								
ATOM	2711	OD1	ASP A 490	93.394	74.879	10.597	1.00	62.95
O								
ATOM	2712	OD2	ASP A 490	93.539	73.447	12.259	1.00	63.21
O								

TABLE 7

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ATOM	2713	N	VAL A 491	93.999	70.397	7.545	1.00	63.51
N								
ATOM	2714	CA	VAL A 491	94.696	69.516	6.618	1.00	63.93
C								
ATOM	2715	C	VAL A 491	93.743	69.145	5.489	1.00	64.46
C								
ATOM	2716	O	VAL A 491	92.536	69.009	5.704	1.00	64.24
O								
ATOM	2717	CB	VAL A 491	95.188	68.214	7.308	1.00	63.80
C								
ATOM	2718	CG1	VAL A 491	96.218	68.545	8.379	1.00	63.55
C								
ATOM	2719	CG2	VAL A 491	94.010	67.464	7.913	1.00	63.70
C								
ATOM	2720	N	ILE A 492	94.287	68.996	4.287	1.00	64.85
N								
ATOM	2721	CA	ILE A 492	93.486	68.633	3.125	1.00	65.38
C								
ATOM	2722	C	ILE A 492	93.564	67.121	2.911	1.00	65.68
C								
ATOM	2723	O	ILE A 492	94.423	66.665	2.123	1.00	66.09
O								
ATOM	2724	CB	ILE A 492	93.974	69.375	1.854	1.00	65.44
C								
ATOM	2725	CG1	ILE A 492	93.922	70.887	2.084	1.00	65.23
C								
ATOM	2726	CG2	ILE A 492	93.101	69.001	0.661	1.00	65.46
C								
ATOM	2727	CD1	ILE A 492	94.390	71.707	0.900	1.00	65.68
C								
TER	2728		ILE A 492					
HETATM	2729	K	K 900	52.929	60.386	29.350	0.75	33.25
K								
HETATM	2730	NA	NA 901	65.775	63.097	15.894	1.00	51.30
NA								
HETATM	2731	P	RVP 602	67.806	55.192	15.010	1.00	32.06
P								
HETATM	2732	O1P	RVP 602	67.447	55.106	13.566	1.00	33.43
O								
HETATM	2733	O2P	RVP 602	68.618	53.993	15.386	1.00	33.48
O								
HETATM	2734	O3P	RVP 602	68.589	56.489	15.335	1.00	32.27
O								
HETATM	2735	O5*	RVP 602	66.564	55.260	15.998	1.00	32.66
O								
HETATM	2736	C5*	RVP 602	65.601	54.207	15.962	1.00	31.36
C								
HETATM	2737	C4*	RVP 602	64.521	54.418	16.985	1.00	30.66
C								
HETATM	2738	O4*	RVP 602	63.766	55.605	16.540	1.00	29.94
O								
HETATM	2739	C3*	RVP 602	63.437	53.370	17.179	1.00	29.26
C								
HETATM	2740	O3*	RVP 602	63.863	52.229	17.914	1.00	28.74
O								
HETATM	2741	C2*	RVP 602	62.343	54.162	17.832	1.00	30.26
C								

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O	HETATM	2742	O2*	RVP	602	62.482	54.278	19.236	1.00	30.38
C	HETATM	2743	C1*	RVP	602	62.434	55.486	17.067	1.00	31.26
N	HETATM	2744	N9	RVP	602	61.475	55.602	15.903	1.00	32.47
C	HETATM	2745	C8	RVP	602	60.989	54.694	14.978	1.00	33.70
N	HETATM	2746	N7	RVP	602	60.171	55.231	14.129	1.00	33.53
C	HETATM	2747	C5	RVP	602	60.084	56.544	14.468	1.00	34.69
C	HETATM	2748	C6	RVP	602	59.329	57.634	13.877	1.00	34.93
O	HETATM	2749	O6	RVP	602	58.592	57.567	12.906	1.00	35.34
N	HETATM	2750	N1	RVP	602	59.501	58.902	14.532	1.00	35.14
N	HETATM	2751	N4	RVP	602	60.883	56.810	15.574	1.00	33.87
O	HETATM	2752	O	HOH	1	75.701	41.635	35.059	1.00	43.94
O	HETATM	2753	O	HOH	2	74.079	38.696	40.465	1.00	55.18
O	HETATM	2754	O	HOH	3	65.938	60.588	24.743	1.00	24.75
O	HETATM	2755	O	HOH	4	90.376	44.734	34.332	1.00	58.18
O	HETATM	2756	O	HOH	5	57.606	58.768	28.316	1.00	26.20
O	HETATM	2757	O	HOH	6	73.742	57.520	36.339	1.00	22.08
O	HETATM	2758	O	HOH	7	59.439	45.332	37.045	1.00	28.29
O	HETATM	2759	O	HOH	8	66.630	48.045	39.016	1.00	24.24
O	HETATM	2760	O	HOH	9	87.313	55.537	31.236	1.00	26.94
O	HETATM	2761	O	HOH	10	79.723	41.990	29.591	1.00	24.41
O	HETATM	2762	O	HOH	11	70.855	54.607	21.999	1.00	25.98
O	HETATM	2763	O	HOH	12	75.110	45.838	32.838	1.00	30.43
O	HETATM	2764	O	HOH	13	71.016	53.391	14.308	1.00	28.65
O	HETATM	2765	O	HOH	14	75.872	56.829	34.478	1.00	29.47
O	HETATM	2766	O	HOH	15	84.437	53.172	21.050	1.00	27.86
O	HETATM	2767	O	HOH	16	76.208	43.857	31.117	1.00	21.58
O	HETATM	2768	O	HOH	17	88.575	53.835	33.310	1.00	28.69
O	HETATM	2769	O	HOH	18	78.805	48.189	37.292	1.00	30.37

TABLE 7

HETATM 2770	O	HOH	19	81.282	64.691	32.797	1.00	26.40
O								
HETATM 2771	O	HOH	20	74.258	59.955	37.886	1.00	35.26
O								
HETATM 2772	O	HOH	21	72.681	38.221	33.950	1.00	27.93
O								
HETATM 2773	O	HOH	22	56.779	57.580	38.836	1.00	33.24
O								
HETATM 2774	O	HOH	23	69.275	68.052	32.909	1.00	34.10
O								
HETATM 2775	O	HOH	24	58.760	51.196	23.042	1.00	28.36
O								
HETATM 2776	O	HOH	25	79.310	40.417	32.071	1.00	30.06
O								
HETATM 2777	O	HOH	26	77.754	54.034	34.410	1.00	31.27
O								
HETATM 2778	O	HOH	27	64.140	56.432	20.380	1.00	35.64
O								
HETATM 2779	O	HOH	28	62.442	38.699	34.139	1.00	30.68
O								
HETATM 2780	O	HOH	29	65.481	36.753	34.839	1.00	29.52
O								
HETATM 2781	O	HOH	30	49.387	44.266	21.091	1.00	32.82
O								
HETATM 2782	O	HOH	31	74.171	50.758	36.345	1.00	35.61
O								
HETATM 2783	O	HOH	32	76.573	41.279	32.222	1.00	30.60
O								
HETATM 2784	O	HOH	33	87.348	67.083	31.015	1.00	29.38
O								
HETATM 2785	O	HOH	34	66.425	37.664	16.827	1.00	27.26
O								
HETATM 2786	O	HOH	35	59.765	51.154	9.792	1.00	31.75
O								
HETATM 2787	O	HOH	36	61.770	50.532	17.896	1.00	26.41
O								
HETATM 2788	O	HOH	37	65.804	58.780	21.469	1.00	36.21
O								
HETATM 2789	O	HOH	38	76.213	52.726	36.406	1.00	34.08
O								
HETATM 2790	O	HOH	39	59.631	51.746	16.407	1.00	31.30
O								
HETATM 2791	O	HOH	40	82.391	67.258	31.863	1.00	31.37
O								
HETATM 2792	O	HOH	41	70.252	33.623	27.556	1.00	35.71
O								
HETATM 2793	O	HOH	42	72.039	67.304	32.099	1.00	35.67
O								
HETATM 2794	O	HOH	43	53.140	51.705	38.165	1.00	31.55
O								
HETATM 2795	O	HOH	44	67.908	38.414	46.440	1.00	32.54
O								
HETATM 2796	O	HOH	45	58.797	45.284	6.070	1.00	39.86
O								
HETATM 2797	O	HOH	46	50.916	46.272	35.836	1.00	39.05
O								



TABLE 7

HETATM 2798	O	HOH	47	48.468	54.286	36.992	1.00	37.90
O								
HETATM 2799	O	HOH	48	79.368	38.350	17.558	1.00	37.55
O								
HETATM 2800	O	HOH	49	65.917	31.312	26.738	1.00	40.60
O								
HETATM 2801	O	HOH	50	75.195	38.963	31.142	1.00	31.97
O								
HETATM 2802	O	HOH	51	51.201	58.619	25.886	1.00	40.51
O								
HETATM 2803	O	HOH	52	56.361	77.266	37.184	1.00	34.64
O								
HETATM 2804	O	HOH	53	75.373	38.767	8.255	1.00	34.82
O								
HETATM 2805	O	HOH	54	62.203	64.463	35.439	1.00	32.93
O								
HETATM 2806	O	HOH	55	67.513	69.374	38.251	1.00	43.30
O								
HETATM 2807	O	HOH	56	59.023	38.343	34.814	1.00	35.89
O								
HETATM 2808	O	HOH	57	61.282	73.583	39.232	1.00	39.52
O								
HETATM 2809	O	HOH	58	74.916	47.914	35.808	1.00	36.57
O								
HETATM 2810	O	HOH	59	62.673	61.732	37.514	1.00	33.12
O								
HETATM 2811	O	HOH	60	74.787	37.123	10.828	1.00	36.31
O								
HETATM 2812	O	HOH	61	87.050	70.287	23.795	1.00	40.37
O								
HETATM 2813	O	HOH	62	60.963	37.766	37.311	1.00	46.47
O								
HETATM 2814	O	HOH	63	74.898	62.998	19.440	1.00	40.44
O								
HETATM 2815	O	HOH	64	60.204	41.357	39.977	1.00	48.22
O								
HETATM 2816	O	HOH	65	83.322	55.796	16.450	1.00	32.01
O								
HETATM 2817	O	HOH	66	74.375	34.757	40.315	1.00	36.09
O								
HETATM 2818	O	HOH	67	71.494	55.957	41.977	1.00	32.49
O								
HETATM 2819	O	HOH	68	59.957	50.992	20.176	1.00	43.21
O								
HETATM 2820	O	HOH	69	66.080	28.763	15.101	1.00	39.12
O								
HETATM 2821	O	HOH	70	50.588	31.847	16.621	1.00	43.31
O								
HETATM 2822	O	HOH	71	69.529	68.913	36.005	1.00	40.30
O								
HETATM 2823	O	HOH	72	73.768	64.532	30.646	1.00	40.71
O								
HETATM 2824	O	HOH	73	92.829	49.112	23.281	1.00	44.30
O								
HETATM 2825	O	HOH	74	70.278	54.233	17.770	1.00	32.36
O								

TABLE 7

HETATM 2826	O	HOH	75	52.179	53.975	25.940	1.00	38.86
O								
HETATM 2827	O	HOH	76	70.150	32.823	38.265	1.00	49.16
O								
HETATM 2828	O	HOH	77	69.559	45.202	46.424	1.00	37.45
O								
HETATM 2829	O	HOH	78	81.658	38.524	24.274	1.00	39.74
O								
HETATM 2830	O	HOH	79	85.501	49.287	39.572	1.00	41.67
O								
HETATM 2831	O	HOH	80	43.313	43.736	23.528	1.00	38.76
O								
HETATM 2832	O	HOH	81	45.058	35.260	19.329	1.00	48.10
O								
HETATM 2833	O	HOH	82	86.888	47.694	13.726	1.00	42.11
O								
HETATM 2834	O	HOH	83	59.990	59.432	31.077	1.00	43.45
O								
HETATM 2835	O	HOH	84	65.702	28.237	26.872	1.00	41.07
O								
HETATM 2836	O	HOH	85	56.392	41.602	37.511	1.00	42.34
O								
HETATM 2837	O	HOH	86	89.958	53.438	35.939	1.00	44.28
O								
HETATM 2838	O	HOH	87	53.813	58.314	38.115	1.00	43.91
O								
HETATM 2839	O	HOH	88	54.846	33.441	37.762	1.00	45.87
O								
HETATM 2840	O	HOH	89	68.555	74.630	33.270	1.00	45.09
O								
HETATM 2841	O	HOH	90	46.075	48.997	27.411	1.00	39.29
O								
HETATM 2842	O	HOH	91	58.611	35.738	27.091	1.00	37.48
O								
HETATM 2843	O	HOH	92	65.536	61.610	38.426	1.00	47.43
O								
HETATM 2844	O	HOH	93	63.014	78.411	34.747	1.00	48.43
O								
HETATM 2845	O	HOH	94	69.402	35.849	7.804	1.00	43.16
O								
HETATM 2846	O	HOH	95	51.178	50.724	21.941	1.00	39.55
O								
HETATM 2847	O	HOH	96	85.871	39.272	22.557	1.00	42.34
O								
HETATM 2848	O	HOH	97	55.141	46.898	17.592	1.00	50.68
O								
HETATM 2849	O	HOH	98	54.804	53.900	40.431	1.00	53.97
O								
HETATM 2850	O	HOH	99	81.143	54.940	13.409	1.00	49.06
O								
HETATM 2851	O	HOH	100	60.601	30.026	22.828	1.00	51.45
O								
HETATM 2852	O	HOH	101	91.377	38.681	33.317	1.00	51.98
O								
HETATM 2853	O	HOH	102	50.491	32.970	12.092	1.00	45.61
O								

TABLE 7

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HETATM 2854	O	HOH	103	65.951	63.935	21.639	1.00	45.03
O								
HETATM 2855	O	HOH	104	92.613	40.981	20.428	1.00	51.23
O								
HETATM 2856	O	HOH	105	66.842	34.584	37.015	1.00	49.51
O								
HETATM 2857	O	HOH	106	79.154	37.014	24.773	1.00	43.76
O								
HETATM 2858	O	HOH	107	72.247	31.318	24.007	1.00	40.85
O								
HETATM 2859	O	HOH	108	60.754	51.022	46.130	1.00	52.32
O								
HETATM 2860	O	HOH	109	45.352	44.922	33.115	1.00	39.72
O								
HETATM 2861	O	HOH	110	43.049	56.846	35.553	1.00	56.39
O								
HETATM 2862	O	HOH	111	93.844	47.843	37.235	1.00	47.50
O								
HETATM 2863	O	HOH	112	72.886	49.728	42.684	1.00	42.85
O								
HETATM 2864	O	HOH	113	44.622	43.340	15.564	1.00	48.15
O								
HETATM 2865	O	HOH	114	56.638	31.718	23.687	1.00	50.30
O								
HETATM 2866	O	HOH	115	75.960	53.691	-1.202	1.00	54.62
O								
HETATM 2867	O	HOH	116	63.275	58.904	18.617	1.00	44.23
O								
HETATM 2868	O	HOH	117	58.451	52.848	43.791	1.00	49.56
O								
HETATM 2869	O	HOH	118	54.165	41.889	6.948	1.00	52.21
O								
HETATM 2870	O	HOH	119	49.652	53.672	24.234	1.00	60.78
O								
HETATM 2871	O	HOH	120	53.791	55.765	20.073	1.00	41.34
O								
HETATM 2872	O	HOH	121	82.081	63.415	21.222	1.00	39.55
O								
HETATM 2873	O	HOH	122	59.793	54.194	20.862	1.00	39.76
O								
HETATM 2874	O	HOH	123	91.395	41.899	35.234	1.00	47.28
O								
HETATM 2875	O	HOH	124	78.660	72.133	28.009	1.00	48.50
O								
HETATM 2876	O	HOH	125	76.816	36.477	6.733	1.00	59.31
O								
HETATM 2877	O	HOH	126	51.697	56.879	39.951	1.00	56.83
O								
HETATM 2878	O	HOH	127	73.160	41.047	42.151	1.00	46.35
O								
HETATM 2879	O	HOH	128	78.361	33.624	16.246	1.00	47.03
O								
HETATM 2880	O	HOH	129	65.071	63.965	35.876	1.00	40.53
O								
HETATM 2881	O	HOH	130	75.546	70.802	31.702	1.00	43.13
O								





HETATM	2938	O	HOH	187	64.663	41.304	7.894	1.00	34.55
O									
HETATM	2939	O	HOH	188	49.873	42.836	7.978	1.00	55.76
O									
HETATM	2940	O	HOH	189	57.589	27.901	17.205	1.00	55.94
O									
HETATM	2941	O	HOH	190	54.487	27.148	17.217	1.00	56.50
O									
HETATM	2942	O	HOH	191	74.055	29.387	14.028	1.00	55.18
O									
HETATM	2943	O	HOH	192	73.877	34.935	8.889	1.00	54.31
O									
HETATM	2944	O	HOH	193	64.874	25.940	14.827	1.00	47.78
O									
HETATM	2945	O	HOH	194	40.739	38.113	26.191	1.00	56.93
O									
HETATM	2946	O	HOH	195	81.037	48.857	11.250	1.00	51.13
O									
HETATM	2947	O	HOH	196	43.149	34.719	28.062	1.00	59.10
O									
HETATM	2948	O	HOH	197	63.348	58.590	43.529	1.00	57.64
O									
HETATM	2949	O	HOH	198	48.595	31.656	25.612	1.00	58.04
O									
HETATM	2950	O	HOH	199	58.778	58.864	41.117	1.00	54.64
O									
HETATM	2951	O	HOH	200	52.055	49.602	40.062	1.00	50.74
O									
HETATM	2952	O	HOH	201	55.370	44.532	39.918	1.00	58.59
O									
CONECT	202	2494							
CONECT	1501	1502							
CONECT	1502	1501	1503	1505					
CONECT	1503	1502	1504						
CONECT	1504	1503	1507						
CONECT	1505	1502	1506						
CONECT	1506	1505							
CONECT	1507	1504							
CONECT	2494	202							
CONECT	2731	2732	2733	2734	2735				
CONECT	2732	2731							
CONECT	2733	2731							
CONECT	2734	2731							
CONECT	2735	2731	2736						
CONECT	2736	2735	2737						
CONECT	2737	2736	2738	2739					
CONECT	2738	2737	2743						
CONECT	2739	2737	2740	2741					
CONECT	2740	2739							
CONECT	2741	2739	2742	2743					
CONECT	2742	2741							
CONECT	2743	2738	2741	2744					
CONECT	2744	2743	2745	2751					
CONECT	2745	2744	2746						
CONECT	2746	2745	2747						
CONECT	2747	2746	2748	2751					
CONECT	2748	2747	2749	2750					

CONECT 2749 2748

CONECT 2750 2748

CONECT 2751 2744 2747

MASTER 497 0 4 14 18 0 0 6 2951 1 30 39

END

TABLE 8. Comparison of published IMPDH structures.

Species	Resolution	R (R <sub>free</sub> ) in %	Missing residues	Heteroatoms	PDB ID
Human	2.9 Å	24.4 (27.0)	2 <sup>nd</sup> domain 130-139, 159-177, flap 400-448, end 499-514	CPR, SAD	1B30
Hamster	2.6 Å	21.7 (28.5)	2 <sup>nd</sup> domain 121-177, flap 421-436	K <sup>+</sup> , XMP*, MPA	1JR1
Borrelia	2.4 Å	21.5 (26.8)	2 <sup>nd</sup> domain 92-129, flap 309-344	SO <sub>4</sub> <sup>+</sup>	1EEP
<i>S. pyogenes</i>	1.9 Å	23.4 (25.8)	Flap 401-414, end 490-493	IMP	1ZFJ
<i>T. foetus</i> apo	2.3 Å	21.8 (26.5)	2 <sup>nd</sup> domain 102-221, loop 314-327, flap 413-431	SO <sub>4</sub> <sup>+</sup>	1AK5
<i>T. foetus</i> + XMP	2.6 Å	20.3 (26.4)	2 <sup>nd</sup> domain 102-221, loop 314-324, flap 413-431, end 484-503	XMP	N/A

\* denotes covalent intermediate



TABLE 9 Data collection and refinement statistics.

Structure	RMP	RMP+MPA
Wavelength (Å)	0.97	0.97
Resolution range (Å)	50–1.90	50–2.15
Resolution of outer shell (Å)	1.90–2.02	2.15–2.28
Current R ( $R_{\text{FREE}}$ ) (%)	24.3 (25.9)	23.3 (26.5)
Unique reflections	50,359	35,250
Total observations	1,289,813	620,781
$I/\sigma_I$ overall/outer shell	33.77/2.39	23.59/2.05
$R_{\text{sym}}$ overall/outer shell (%)	6.2/68.9	7.2/49.1
Completeness overall/outer shell (%)	99.9/100	94.0/79.5
Degrees collected	25	20
Number of ordered water molecules	211	120
Deviation from ideal bond lengths (Å)	0.005	0.006
Bond angle RMSD (°)	1.2	1.2
Dihedral angle RMSD (°)	22.7	22.6
Improper angle RMSD (°)	0.71	0.70
Cell dimensions $\alpha=\beta=\gamma=90^\circ$ , $a=b=c$ (Å)	154.7	155.1
Space group	P432	P432
Mosaicity (°)	0.45	0.50